DUPLICATE

National Meteorological Library & Archive
London Road
Bracknell RG12 2SZ

UDC.551.577.21(427)

METEOROLOGICAL OFFICE

London Road, Bracknell, Berkshire

HYDROLOGICAL MEMORANDUM No.9

Rainfall over the areas of the Yorkshire Ouse, Hull and East Yorkshire River Boards, 1916—1950

by

E.H.Rowsell

ORGS UKMO H

National Meteorological Library
FitzRoy Road, Exeter, Devon. EX1 3PB

National Meteorological
Library & Archive
London Road
Bracknell RG12 2SZ

Amendments to Hyd. Memo No. 9

Page	Wrong	Correct
9.	Mulgrove Castle	Mulgrave Castle
	Mawes	Hawes
	Stome & Ears Wham	Stone & Ears Wham
	Serutom	Scruton
	Cragg Lane Farm	Craggs Lane Farm
	Sowerly	Sowerby
10.	Blubber Houses	Blubberhouses
	Swinsey	Swinsty
	Harwood House	Harewood House
	Reccall	Riccall
	Hulton-le-Hole	Hutton-le-Hole
	Malham Tam	Malham Tarn
	Cringlis Res	Cringles Res.
	Lower Loithe Res.	Lower Laithe Res.
11.	Guisley Moor	Guiseley Moor
	Leeds, Roundham Park	Leeds, Roundhay Park
	Castle Bar	Castle Carr
	Great Waldem Edge No. 2	Great Wolden Edge No. 2
	Blackmoor fort	Blackmoorfoot
	Rpyd Moor	**Royd Moor**
12.	Heekmondwike	Heckmondwike
	Pontfract	Pontefract
	Greenley Carr	Gringley Carr
	Thornsea	Thornseat

28 "Scarborough - Other extremes" under col. "Year"

delete $\frac{1952}{17.18}$

22. **Scarborough - All months column - 0.20 - 1487**
not 0.20 - 1488

3 8078 0005 0519 0

HYDROLOGICAL MEMORANDA NO. 9

Rainfall over the areas of the Yorkshire Ouse, Hull and East Yorkshire River Boards, 1916-1950

1. Rainfall, 1916-1950

1.1 Introduction The estimation of standard-period averages for the months or for the year, is carried out in three stages; the selection of sound, homogeneous records complete for the 35 years, 1916-1950, which provide arithmetic means of monthly and annual rainfall, the basic values for all other work; the estimation of standard-period, annual averages for short-period stations; the estimation of standard-period, monthly averages for stations in the second group, where these are needed for special purposes.

A detailed account of the methods developed and used in the Meteorological Office (M.O.3) to estimate standard-period averages from short-period records, is given in Hydrological Memoranda No. 5.

It is possible to process the data in a number of ways but the maps and tables are presented here in the simplest, most precise forms in order to be of use to a wide range of enquirers.

1.2 The Primary Survey, for Great Britain and Northern Ireland, of stations with complete records during 1916-1950, included some cases where the site had been changed to one with a better exposure and observations from both sites had been recorded for a few years. Attempts were made to amend the earlier readings by comparison of the data during a period of overlap, in order to have a set of values from 1916 to the date of the change, which would be representative of the later, and better, record. But since the earlier exposures were usually unsatisfactory (being over-exposed or over-sheltered), the results were mostly erratic and the amended sets of values were not homogeneous. In a few cases, small breaks in a long record were completed by using estimated values, based on a nearby station, with or without the use of a modifying factor.

Of the many records examined, monthly and annual averages were accepted for 78 stations, 72 for the Yorkshire Ouse, 6 for Hull and East Yorkshire areas. Settle, just over the border in the area of the Lancashire River Board has been added to represent the extreme west. The accepted values (in inches), together with the proportions (per cent) of each monthly average to the annual average, are given in Table I together with the altitude and the National Grid reference for each station. Most of these averages were included in H.M.S.O. publication, M.O. 635, "Averages of Rainfall for Great Britain and Northern Ireland, 1916-1950", some were omitted because other stations were so near.

The percentage proportion of monthly averages to the annual averages for the long-period stations were used to draw a series of twelve monthly maps from which it is possible to estimate the percentage of average annual rainfall, for any place, for each month of the year. These maps are shown as Figure 1. Values estimated for a few points between the isopercental lines have been added to give a clearer indication of the variations from place to place. The points chosen are not necessarily the same for each map.

1.3 The Secondary Survey of short-period stations was undertaken next, using records up to the time of the survey, usually into the late 1950's. Long-period stations, whose averages had been rejected from the Primary Survey because the record was not homogeneous, were examined again and averages were estimated for the later (and usually improved) part of the series of observations. Averages based on data for less than 5 years were not usually accepted for publication. A list of the accepted averages, for the

short-period stations, is given in Table II together with the altitude and National Grid reference for each. The stations are listed in an order based on natural drainage areas which will be used for the first time in British Rainfall, 1961.

These averages, together with the long-period averages listed in Table I, were plotted on Ordnance Survey Maps (scale 4 miles to the inch), and used to draw the lines of average annual rainfall, 1916-1950. The map is shown as Figure 2. The Secondary Survey is frequently revised for special areas using the most up-to-date observations for relatively new stations and the map is subject to revision from time to time. The redrawing of the isohyets usually results in greater detail and perhaps a clearer definition of a wet area as more and more observations become available from improved River Board networks of rain-gauges. Drastic changes are not expected. In Tables I, II and III, with a few exceptions, the average quoted are for records still being maintained in 1963.

1.4 Monthly Averages for a further group of stations were next estimated for use in the Monthly Weather Report and for enquiries. For this purpose some stations were chosen from those listed in Table II to supplement those listed in Table I. To find the monthly average, the monthly proportions (per cent of annual average) were chosen from the equipercental maps (see Fig. 1) so that the total for the twelve months was 100. These monthly percentages were then used to apportion the annual average (in inches) amongst the months. The results are given in Table III.

1.5 Daily Rainfall, 1916-1950 Five of the initial 78 records which were accepted for the Primary Survey (1.2.) were analysed further. To this group we added Settle. These records had regular daily entries, for the 24-hour period 0900 to 0900, for each of the 35 years, 1916-1950. Table IVa gives for each of the stations the 35-year totals for each day of the year (in inches). Table IVb gives 1/35 of all possible totals from .17 in. to 24.67 in., thus providing a reduction table for the values in IVa to give average daily falls from "trace" to .70 in. For 29 February the reduction factor is, of course, 1/9.

These daily averages can be re-grouped as 5-day means, 7-day means, consecutive or sliding means or in whatever form suits a specific requirement.

2. Frequencies of Daily Rainfall, 1916-1950 The same set of daily values used for Table IVa were re-grouped to give frequency tables with intervals of .01 inch. These have been re-arranged in Table V, to give accumulated frequencies with intervals of .10 in. up to 2.50 in. and a wider grouping above this.

3. Extremes of Rainfall The records for the 35-year period, 1916-1950, for the stations used in Tables IV and V were also used to find maximum and minimum values for the year and for each month and also maximum daily values for each month. These maxima and minima are given in Table VI and Table VII. Additional extremes are given in these tables to cover the 50-year period, 1911-1960.

Appendix I

Intense Falls Falls of 2 hours or less, which have been recorded in British Rainfall and rank as "noteworthy", "remarkable" or "very rare", are listed in Appendix I.

H ROWSELL

Meteorological Office, M.O.3a
Bracknell, Berkshire

TABLE I. Monthly and Annual Averages of Rainfall 1916-1950 over the River Board Areas of the Yorkshire Ouse and the Hull and East Yorkshire Rivers

County	Station & N.G.R.	Alt. ft.	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year	
Yorks. N.R.	Scarborough TA(54)044884	118	2.53	1.80	1.52	1.77	1.84	1.70	2.48	2.60	2.08	2.24	2.55	2.46	25.57	Inch
			9.9	7.0	5.9	6.9	7.2	6.7	9.7	10.2	8.1	8.8	10.0	9.6	100.0	%
" E.R.	Lowthorpe TA(54)084608	63	2.51	1.91	1.57	1.80	1.87	1.65	2.36	2.65	2.34	2.51	2.79	2.36	26.32	Inch
			9.5	7.21	6.0	6.8	7.1	6.3	9.0	10.1	8.9	9.5	10.6	9.0	100.0	%
" "	Hempholme Lock TA(54)080499	11	2.36	1.83	1.52	1.78	1.89	1.91	2.51	2.71	2.15	2.37	2.63	2.27	25.93	Inch
			9.1	7.1	5.9	6.9	7.3	7.4	9.7	10.4	8.3	9.1	10.1	8.7	100.0	%
" "	Dalton Holme TA(44)965453	120	2.64	2.00	1.69	1.98	2.15	2.05	2.66	2.84	2.31	2.73	2.90	2.50	28.45	Inch
			9.3	7.0	5.9	7.0	7.6	7.2	9.3	10.0	8.1	9.6	10.2	8.8	100.0	%
" "	S. Bullock P. Sta. TA(54)053426	11	2.40	1.81	1.50	1.79	1.92	1.82	2.45	2.61	2.09	2.42	2.71	2.27	25.79	Inch
			9.3	7.0	5.8	6.9	7.5	7.1	9.5	10.1	8.1	9.4	10.5	8.8	100.0	%
" "	Holme-on-Spalding Moor SE(44)813382	30	2.43	1.82	1.50	1.79	2.00	1.95	2.80	2.69	2.12	2.41	2.53	2.24	26.29	Inch
			9.3	6.9	5.7	6.8	7.6	7.4	10.7	10.2	8.1	9.2	9.6	8.5	100.0	%
" "	Hull TA(54)084302	8	2.3	1.83	1.49	1.83	1.94	1.72	2.41	2.58	2.03	2.38	2.57	2.25	25.39	Inch
			9.3	7.2	5.8	7.2	7.6	6.8	9.5	10.1	8.0	9.4	10.1	8.9	100.0	%
" N.R.	Bolton Hall SE(44)075897	420	3.96	2.90	2.27	2.43	2.26	1.93	2.78	3.09	2.71	3.60	3.58	3.38	34.89	Inch
			11.3	8.3	6.5	7.0	6.5	5.5	8.0	8.8	7.8	10.3	10.3	9.7	100.0	%
" "	Breary Bank SE(44)158802	600	4.37	3.28	2.43	2.66	2.69	2.26	3.12	3.42	3.05	3.96	4.13	3.84	39.21	Inch
			11.1	8.4	6.2	6.8	6.9	5.8	7.9	8.7	7.8	10.1	10.5	9.8	100.0	%
" "	Towler Hill SE(44)154798	820	4.28	3.21	2.44	2.64	2.69	2.25	3.05	3.40	3.03	3.89	4.06	3.76	38.70	Inch
			11.1	8.3	6.3	6.8	6.9	5.8	7.9	8.8	7.8	10.1	10.5	9.7	100.0	%
" "	Leighton Res. SE(44)161790	634	4.14	3.20	2.38	2.57	2.60	2.14	3.03	3.27	2.97	3.74	3.88	3.59	37.51	Inch
			11.0	8.5	6.4	6.9	6.9	5.7	8.1	8.7	7.9	10.0	10.3	9.6	100.0	%
" W.R.	Hambleton Hill SE(44)160730	1106	4.44	3.51	2.73	2.80	2.80	2.34	3.37	3.49	3.40	3.94	4.39	3.60	40.81	Inch
			10.9	8.6	6.6	6.9	6.9	5.7	8.3	8.5	8.3	9.7	10.8	8.8	100.0	%
" "	Hawsett SE(44)184729	820	4.14	3.27	2.35	2.57	2.65	2.24	3.07	3.43	3.17	3.91	4.13	3.72	38.65	Inch
			10.7	8.5	6.1	6.6	6.9	5.8	7.9	8.9	8.2	10.1	10.7	9.6	100.0	%

Table I. Monthly and Annual Averages of Rainfall 1916-1950 over the River Board Areas of the Yorkshire Ouse and the Hull and East Yorkshire Rivers (Contd.)

County	Station & N.G.R.	Alt. ft.	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year	
Yorks. W.R.	Drover's Inn SE(44)213722	576	4.34 11.1	3.43 8.8	2.42 6.2	2.59 6.6	2.64 6.8	2.30 5.9	3.15 8.1	3.30 8.5	3.19 8.2	3.89 10.0	4.08 10.4	3.69 9.4	39.02 100.0	Inch %
" N.R.	Gunnerside Lodge SD(34)934982	900	5.74 11.9	4.05 8.4	3.15 6.5	3.04 6.3	2.78 5.8	2.51 5.2	3.42 7.1	4.17 8.7	3.94 8.2	5.4 11.2	5.18 10.8	4.76 9.9	48.14 100.0	Inch %
" "	Maunby Hall SE(44)355862	90	2.46 9.3	1.84 7.0	1.61 6.1	1.79 6.8	2.00 7.6	1.92 7.3	2.55 9,7	2.87 10.9	2.24 8.5	2.43 9.2	2.36 9.0	2.26 8.6	26.33 100.0	Inch %
" "	Thirsk, S. Villa SE(44)437818	115	2.62 9.8	1.81 6.7	1.54 5.7	1.73 6.5	1.90 7.1	1.97 7.3	2.78 10.4	2.94 11.0	2.25 8.4	2.47 9.2	2.46 9.2	2.32 8.7	26.79 100.0	Inch %
" "	Doltby, East SE(44)491866	459	3.05 9.7	2.20 7.0	1.98 6.3	2.05 6.5	2.16 6.9	2.20 7.0	3.07 9.8	3.25 10.4	2.60 8.3	2.84 9.0	3.17 10.1	2.82 9.0	31.39 100.0	Inch %
" "	Mount St. John, No.1 SE(44)474848	540	2.80 9.7	2.03 7.1	1.74 6.0	1.85 6.4	2.02 7.0	2.11 7.3	2.96 10.3	3.03 10.5	2.39 8.3	2.63 9.1	2.78 9.6	2.52 8.7	28.86 100.0	Inch %
" "	Coxwold SE(44)534733	260	2.81 9.7	1.99 6.9	1.77 6.1	1.93 6.7	2.12 7.4	2.06 7.1	2.81 9.7	2.98 10.3	2.47 8.6	2.63 9.1	2.84 9.8	2.49 8.6	28.90 100.0	Inch %
" W.R.	Rain Stang SE(44)079758	1470	5.94 11.7	3.98 7.8	2.90 5.7	3.21 6.3	3.11 6.1	2.82 5.6	3.92 7.7	4.56 9.0	4.26 8.4	5.66 11.1	5.57 11.0	4.87 9.6	50.80 100.0	Inch %
" "	Knebbs Moor SE(44)237557	700	3.26 9.8	2.58 7.8	2.03 6.1	2,2; 6.7	2.37 7.1	2.24 6.8	2.97 8.9	3.16 9.5	2.69 8.1	3.10 9.3	3.52 10.6	3.10 9.3	33.23 100.0	Inch %
" "	Scargill Res. SE(44)232537	646	3.51 10.0	2.76 7.9	2.17 6.2	2.36 6.7	2.60 7.4	2.26 6.4	3.29 9.4	3.35 9.5	2.82 8.0	3.35 9.6	3.51 10.0	3.12 8.9	35.10 100.0	Inch %
" "	Cobblers Cottage SE(44)239525	730	3.35 9.9	2.61 7.7	1.95 5.7	2.20 6.5	2.52 7.4	2.30 6.8	3.11 9.1	3.25 9.6	2.75 8.1	3.16 9.3	3.62 10.7	3.13 9.2	33.95 100.0	Inch %
" "	Harrogate SE(44)303579	208	3.14 10.1	2.43 7.8	1.95 6.2	2.09 6.7	2.46 7.9	2.00 6.4	2.83 9.1	2.92 9.3	2.49 8.0	2.96 9.5	3.12 10.0	2.80 9.0	31.19 100.0	Inch %
" "	Spofforth S. Wks. SE(44)369527	181	2.79 9.5	2.15 7.3	1.75 5.9	2.05 7.0	2.37 8.1	1.96 6.7	2.92 9.9	2.83 9.6	2.40 8.2	2.69 9.1	2.94 10.0	2.57 8.7	29.42 100.0	Inch %

TABLE I. Monthly and Annual Averages of Rainfall 1916-1950 over the River Board Areas of the Yorkshire Ouse and the Hull and East Yorkshire Rivers (Contd.)

County	Station & N.G.R.	Alt. ft.	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year	
Yorks. N.R.	York, Museum SE(44)598522	57	2.34 9.5	1.68 6.8	1.43 5.8	1.70 6.9	1.97 8.0	1.85 7.5	2.48 10.0	2.57 10.4	2.08 8.4	2.21 8.9	2.36 9.6	2.03 8.2	24.70 100.0	Inch %
" W.R.	Sandbed Beck SE(44)020614	676	4.89 10.9	3.81 8.5	2.70 6.0	2.76 6.1	2.65 5.9	2.79 6.2	3.76 8.4	4.30 9.6	3.75 8.4	4.78 10.6	4.58 10.2	4.15 9.2	44.92 100.0	Inch %
" "	Ilkley SE(44)113476	315	4.02 10.7	3.29 8.7	2.35 6.2	2.57 6.8	2.62 7.0	2.26 6.0	3.08 8.2	3.40 9.0	2.93 7.8	3.78 10.0	3.83 10.2	3.56 9.4	37.69 100.0	Inch %
" "	Broad Dubb SE(44)219530	725	3.47 10.0	2.71 7.8	2.10 6.1	2.33 6.7	2.51 7.3	2.30 6.6	3.11 9.0	3.21 9.3	2.83 8.2	3.22 9.3	3.64 10.5	3.18 9.2	34.61 100.0	Inch %
" N.R.	Osgodby TA(54)055840	166	2.74 10.2	1.80 6.7	1.59 5.9	1.89 7.0	1.96 7.3	1.74 6.5	2.61 9.7	2.60 9.7	2.02 7.5	2.43 9.0	2.82 10.5	2.70 10.0	26.90 100.0	Inch %
" E.R.	Scampton Hall SE(44)864757	102	2.87 10.1	2.06 7.2	1.72 6.1	1.97 6.9	2.05 7.2	1.96 6.9	2.63 9.3	2.82 9.9	2.24 7.9	2.63 9.3	2.91 10.2	2.57 9.0	28.43 100.0	Inch %
" N.R.	Ravenswyke SE(44)706873	270	2.99 10.2	2.13 7.2	1.78 6.1	1.89 6.4	2.11 7.2	1.90 6.5	2.70 9.2	2.99 10.2	2.36 8.0	2.80 9.5	3.03 10.3	2.69 9.2	29.37 100.0	Inch %
" "	Hovingham Hall SE(44)665757	119	2.94 10.1	2.24 7.7	1.76 6.0	1.86 6.4	2.21 7.6	2.08 7.2	2.76 9.5	2.91 10.0	2.35 8.1	2.63 9.0	2.70 9.3	2.64 9.1	29.08 100.0	Inch %
" E.R.	Birdsall House SE(44)815648	308	3.18 10.5	2.27 7.5	1.88 6.2	2.06 6.8	2.13 7.0	2.01 6.6	2.83 9.3	3.04 10.0	2.40 7.9	2.75 9.0	3.06 10.1	2.77 9.1	30.38 100.0	Inch %
" W.R.	Salterforth SD(34)880440	832	5.28 10.6	4.04 8.1	2.76 5.6	2.86 5.8	2.92 5.9	3.08 6.2	4.24 8.6	4.83 9.7	4.45 9.0	5.53 11.2	5.07 10.2	4.50 9.1	49.56 100.0	Inch %
" "	Earby S. Wks. SD(34)909472	426	4.43 10.8	3.32 8.1	2.34 5.7	2.41 5.9	2.51 6.1	2.47 6.0	3.43 8.4	3.99 9.8	3.48 8.5	4.48 11.0	4.27 10.4	3.79 9.3	40.92 100.0	Inch %
" "	Skipton, Town Hall SD(34)991518	367	3.70 10.5	2.88 8.1	1.97 5.6	2.21 6.2	2.36 6.7	2.13 6.0	3.13 8.9	3.46 9.8	2.95 8.3	3.76 10.6	3.58 10.1	3.26 9.2	35.39 100.0	Inch %
" "	Nan Scar SE(44)037334	1101	5.54 11.2	4.20 8.5	2.92 5.9	3.09 6.2	3.12 6.3	2.83 5.7	3.76 7.6	4.49 9.1	4.00 8.1	5.22 10.6	5.54 11.2	4.76 9.6	49.47 100.0	Inch %

TABLE I. Monthly and Annual Averages of Rainfall 1916-1950 over the River Board Areas of the Yorkshire Ouse and the Hull and East Yorkshire Rivers.(Contd.)

County	Station & N.G.R.	Alt. ft.	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year	
Yorks. W.R.	Leeshaw Res. SE(44)011351	875	5.76 11.3	4.49 8.8	3.01 5.9	3.22 6.3	3.15 6.2	2.88 5.6	3.86 7.5	4.56 8.9	4.25 8.3	5.32 10.4	5.61 11.0	5.00 9.8	51.11 100.0	Inch %
" "	Stubden Res. No. SE(44)057332	1071	5.11 10.8	4.00 8.4	2.85 6.0	3.02 6.4	3.18 6.7	2.78 5.8	3.61 7.6	4.33 9.1	3.93 8.3	5.01 10.5	5.18 10.9	4.53 9.5	47.53 100.0	Inch %
" "	Brayshaw Res. SE(44)122306	982	4.05 10.6	3.34 8.7	2.32 6.1	2.47 6.4	2.60 6.8	2.35 6.1	3.20 8.3	3.41 8.9	3.14 8.2	3.91 10.2	4.09 10.7	3.45 9.0	38.33 100.0	Inch %
" "	Chellow Heights Res. SE(44)116352	848	3.82 10.4	3.04 8.3	2.31 6.3	2.51 6.8	2.66 7.2	2.20 6.0	3.05 8.3	3.34 9.1	2.96 8.0	3.70 10.0	3.87 10.5	3.36 9.1	36.82 100.0	Inch %
" "	Heaton Res. SE(44)144352	531	3.62 10.6	2.83 8.3	2.15 6.3	2.36 6.9	2.48 7.2	2.01 5.9	2.94 8.6	3.03 8.9	2.62 7.7	3.34 9.8	3.60 10.5	3.17 9.3	34.15 100.0	Inch %
" "	Wortley Res. SE(44)265325	307	2.70 9.6	2.14 7.6	1.73 6.1	1.95 6.9	2.31 8.2	1.79 6.3	2.62 9.3	2.70 9.6	2.26 8.0	2.66 9.4	2.89 10.3	2.45 8.7	28.20 100.0	Inch %
" "	Weetwood Filters SE(44)271373	328	2.88 9.8	2.25 7.6	1.82 6.2	2.05 7.0	2.37 8.1	1.89 6.4	2.78 9.4	2.80 9.5	2.35 8.0	2.76 9.4	3.00 10.3	2.48 8.4	29.43 100.0	Inch %
" "	Woodhouse Moor SE(44)291350	307	2.64 9.5	2.14 7.7	1.70 6.1	1.95 7.0	2.29 8.2	1.83 6.5	2.6 9.6	2.69 9.6	2.24 8.0	2.57 9.2	2.84 10.2	2.34 8.4	27.91 100.0	Inch %
" "	Leeds, Knostrop SE(44)324313	72	2.32 9.6	1.83 7.6	1.44 6.0	1.76 7.3	2.05 8.5	1.48 6.2	2.33 9.7	2.35 9.8	1.94 8.1	2.17 9.0	2.36 9.8	2.03 8.4	24.06 100.0	Inch %
" "	Ramsden Res. SD(34)915214	993	5.62 10.5	4.25 7.9	3.08 5.8	3.19 6.0	3.16 5.9	3.27 6.1	4.26 8.0	5.48 10.2	4.65 8.7	5.78 10.8	5.74 10.7	5.01 9.4	53.49 100.0	Inch %
" "	Greystones SE(44)001178	1192	5.72 10.7	4.48 8.4	3.25 6.1	3.17 5.9	3.41 6.4	3.30 6.1	4.19 7.8	4.96 9.2	4.56 8.5	5.72 10.7	5.72 10.7	5.12 9.5	53.60 100.0	Inch %
" "	Gt. Walden Edge No.1 SD(34)996156	1135	5.45 10.5	4.31 8.3	3.15 6.0	3.15 6.0	3.39 6.5	3.35 6.4	4.24 8.1	4.97 9.5	4.45 8.5	5.50 10.5	5.49 10.5	4.79 9.2	52.24 100.0	Inch %
" "	Albert Res. SE(44)074256	795	4.15 10.8	3.21 8.3	2.29 5.9	2.58 6.7	2.57 6.7	2.41 6.2	3.07 8.0	3.38 8.8	3.20 8.3	4.10 10.6	4.04 10.5	3.56 9.2	38.56 100.0	Inch %

TABLE I. Monthly and Annual Averages of Rainfall 1916-1950 over the River Board Areas of the Yorkshire Ouse and the Hull and East Yorkshire Rivers (Contd.)

County	Station & N.G.R.	Alt. ft.	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year	
Yorks. W.R.	Halifax Library SE(44)085250	625	3.85	2.96	2.19	2.43	2.49	2.18	2.83	3.12	2.88	3.71	3.69	3.23	35.56	Inch
			10.8	8.3	6.2	6.8	7.0	6.1	8.0	8.8	8.1	10.4	10.4	9.1	100.0	%
" "	Wessenden Head SE(44)068077	1200	5.06	4.03	3.16	3.28	3.40	3.14	4.10	4.69	4.21	5.05	5.38	4.60	50.10	Inch
			10.1	8.0	6.3	6.5	6.8	6.3	8.2	9.4	8.4	10.1	10.7	9.2	100.0	%
" "	Butterley Moss SE(44)047096	1110	5.09	4.01	3.15	3.23	3.36	3.17	4.08	4.61	4.24	5.23	5.46	4.62	50.25	Inch
			10.1	8.0	6.3	6.4	6.7	6.3	8.1	9.2	8.4	10.4	10.9	9.2	100.0	%
" "	Huddersfield, Oakes SE(44)113177	762	4.02	3.32	2.51	2.50	2.67	2.25	3.02	3.24	2.93	3.89	3.90	3.37	37.62	Inch
			10.7	8.8	6.7	6.6	7.1	6.0	8.0	8.6	7.8	10.3	10.4	9.0	100.0	%
" "	Yateholme SE(44)111043	1009	7.37	5.91	4.19	4.23	3.72	3.53	4.59	5.16	5.14	6.69	7.01	6.19	63.63	Inch
			11.6	9.1	6.6	6.7	5.8	5.6	7.2	8.1	8.1	10.5	11.0	9.7	100.0	%
" "	Brow Grains SE(44)080105	900	5.29	4.22	3.09	3.29	3.26	2.93	3.80	4.47	4.12	5.24	5.40	4.61	49.72	Inch
			10.6	8.5	6.2	6.6	6.6	5.9	7.6	9.0	8.3	10.5	10.9	9.3	100.0	%
" "	Staincliffe Res. SE(44)229236	492	2.53	2.07	1.69	1.89	2.28	1.79	2.62	2.62	2.19	2.61	2.77	2.27	27.33	Inch
			9.3	7.6	6.2	6.9	8.3	6.5	9.6	9.6	8.0	9.6	10.1	8.3	100.0	%
" "	Jaw Hill Filters SE(44)293233	315	2.36	1.96	1.56	1.80	2.21	1.66	2.58	2.55	2.14	2.38	2.49	2.06	25.75	Inch
			9.2	7.6	6.1	7.0	8.6	6.4	10.0	9.9	8.3	9.2	9.7	8.0	100.0	%
" "	Wakefield SE(44)327199	115	2.53	2.12	1.71	1.81	2.22	1.63	2.54	2.62	2.07	2.44	2.57	2.12	26.38	Inch
			9.6	8.0	6.5	6.9	8.4	6.2	9.6	9.9	7.9	9.3	9.7	8.0	100.0	%
" "	Border Hill SE(44)177011	1148	5.66	4.49	3.25	3.28	3.05	2.82	3.76	4.03	3.92	5.21	5.57	4.86	49.90	Inch
			11.3	9.0	6.5	6.6	6.1	5.7	7.5	8.1	7.9	10.4	11.2	9.7	100.0	%
" "	Upper Midhope SK(43)215999	925	4.80	3.59	2.79	2.94	2.84	2.26	3.12	3.32	3.20	4.27	4.77	4.06	41.96	Inch
			11.4	8.6	6.6	7.0	6.8	5.4	7.4	7.9	7.6	10.2	11.4	9.7	100.0	%
" "	Sheep House SE(44)252004	945	3.83	3.00	2.37	2.55	2.64	2.06	2.79	2.93	2.74	3.54	3.92	3.30	35.67	Inch
			10.7	8.4	6.6	7.2	7.4	5.8	7.8	8.2	7.7	9.9	11.0	9.3	100.0	%
" "	Underbank Res. SK(43)247995	604	4.13	3.14	2.58	2.64	2.70	2.05	2.87	2.92	2.79	3.69	4.20	3.66	37.37	Inch
			11.0	8.4	6.9	7.1	7.2	5.5	7.7	7.8	7.5	9.9	11.2	9.8	100.0	%

TABLE I. Monthly and Annual Averages of Rainfall 1916-1950 over the River Board Areas of the Yorkshire Ouse and the Hull and East Yorkshire Rivers (Contd.)

County	Station & N.G.R.	Alt. ft.	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year	
Yorks. W.R.	Broad Car SK(43)223904	1004	5.03 11.1	4.23 9.0	2.99 6.3	3.30 7.0	3.04 6.5	2.75 5.8	3.69 7.8	3.78 8.0	3.67 7.8	4.79 10.2	5.16 10.9	4.51 9.6	47.14 100.0	Inch %
" "	Loftshaw Strines SK(43)242903		4.90 11.0	4.00 8.9	2.86 6.4	3.06 6.8	2.87 6.4	2.64 5.9	3.46 7.7	3.58 8.0	3.46 7.7	4.63 10.4	4.94 11.0	4.37 9.8	44.77 100.0	Inch %
" "	Oakes Farm, Damflask SK(43)272903	650	4.26 11.0	3.49 9.0	2.44 6.3	2.70 7.0	2.62 6.8	2.23 5.7	3.06 7.9	3.00 7.7	2.96 7.6	3.95 10.2	4.25 11.0	3.81 9.8	38.77 100.0	Inch %
" "	Redmires Res. SK(43)262857	1110	4.57 10.9	3.65 8.7	2.87 6.8	2.97 7.1	2.80 6.7	2.49 5.9	3.38 8.0	3.34 7.9	3.31 7.9	4.11 9.8	4.53 10.8	3.98 9.5	42.00 100.0	Inch %
" "	Rivelin SK(43)287869	564	3.90 10.5	3.20 8.6	2.49 6.7	2.65 7.1	2.63 7.1	2.15 5.8	2.96 7.9	3.02 8.1	2.87 7.7	3.71 9.9	4.08 10.9	3.62 9.7	37.28 10 .0	Inch %
" "	Crookes SK(43)330872	629	3.38 10.6	2.63 8.3	2.06 6.4	2.14 6.7	2.34 7.4	1.88 5.9	2.75 8.6	2.76 8.7	2.40 7.5	3.12 9.8	3.39 10.6	3.03 9.5	31.86 100.0	Inch %
" "	Crookes NO. 2 SK(43)330872	629	3.32 10.6	2.59 8.3	2.00 6.4	2.10 6.7	2.30 7.4	1.85 5.9	2.70 8.6	2.73 8.7	2.36 7.5	3.07 9.8	3.32 10.6	2.98 9.5	31.32 100.0	Inch %
Derbys.	Lower Linacre Res. SK(43)338725	430	3.58 10.8	2.72 8.2	2.24 6.8	2.31 7.0	2.41 7.3	1.95 5.9	2.76 8.3	2.93 8.8	2.50 7.5	3.14 9.5	3.42 10.3	3.18 9.6	33.14 100.0	Inch %
Yorks. W.R.	Firsby Res. SK(43)495958	189	2.31 8.7	1.99 7.5	1.76 6.6	1.89 7.1	2.21 8.3	1.85 6.9	2.63 9.8	2.78 10.4	2.16 8.1	2.39 8.9	2.60 9.7	2.13 8.0	26.70 100.0	Inch %
" "	Thrybergh SK(43)474961	184	2.27 8.9	1.97 7.8	1.70 6.7	1.80 7.1	2.03 8.0	1.72 6.8	2.45 9.6	2.53 10.0	2.04 8.0	2.27 8.9	2.52 9.9	2.10 8.3	25.40 100.0	Inch %
" "	Barnsley, Jordan Hill SE(44)336069	460	2.64 9.8	2.15 8.0	1.76 6.6	1.85 6.9	2.21 8.2	1.74 6.5	2.51 9.4	2.53 9.4	2.14 8.0	2.44 9.1	2.64 9.8	2.23 8.3	26.84 100.0	Inch %
" "	Burntwood Hall SK(44)428092	378	2.48 9.1	2.06 7.5	1.76 6.5	1.90 7.0	2.30 8.4	1.81 6.6	2.65 9.7	2.76 10.0	2.23 8.5	2.44 8.9	2.71 9.9	2.15 7.9	27.32 100.0	Inch %
" "	Wortley Res. SK(44)363035	700	3.25 10.1	2.54 7.9	2.06 6.4	2.25 7.0	2.45 7.6	1.97 6.1	2.75 8.6	2.84 8.8	2.46 7.6	3.14 9.8	3.49 10.9	2.96 9.2	32.16 100.0	Inch %
" "	Settle SD(34)816633	450	5.43 11.6	3.82 8.2	2.66 5.7	2.79 5.9	2.75 5.9	2.59 5.5	3.71 7.9	4.39 9.4	3.93 8.4	5.23 11.2	4.85 10.4	4.65 9.9	46.80 100.0	Inch %

TABLE II. Estimated Annual Averages of Rainfall, 1916-1950
for short-period stations

County	Station	Alt. ft.	N.G.R.	Av.
Yorkshire Ouse				
Yorks. N.R.	Mulgrave Castle	410	NZ(45)845125	28.95
" "	Danby Lodge	399	NZ(45)717084	37.57
" "	Whitby	135	NZ(45)895109	26.35
" E.R.	Filey P. Sta.	123	TA(54)114807	24.45
Hull & E. Yorks				
Yorks. E.R.	High Mowthorpe	574	SE(44)885688	30.64
" "	Bridlington	157	TA(54)175689	27.41
" "	Burton Agnes	52	TA(54)110634	26.46
" "	Hornsea Town Hall	12	TA(54)207482	24.26
" "	Burton Pidsea	23	TA(54)246314	24.78
" "	Withernsea High School	28	TA(54)337281	23.81
" "	Easington	29	TA(54)399195	24.19
" "	Brandesburton Hall	27	TA(54)112478	26.25
" "	Langtoft	260	TA(54)009670	27.79
" "	Hutton Cranswick	66	TA(54)023523	26.16
" "	Dunswell P. Sta.	6	TA(54)067350	24.79
" "	Springhead	14	TA(54)040294	25.54
" "	Hessle, Sandford	80	TA(54)027261	26.40
Yorkshire Ouse				
Yorks. N.R.	Moorland Cottage	1125	SD(34)807923	72.07
" "	Lawes S. Wks.	745	SD(34)874902	57.11
" "	Askrigg	670	SD(34)945907	42.17
" "	Longridge	810	SD(34)960832	57.40
" "	Leyburn	358	SE(44)137887	31.76
" "	Low Houses	693	SE(44)137812	40.39
" "	Healey Pasture	620	SE(44)157808	38.19
" W.R.	Agill Head	1380	SE(44)114766	47.15
" N.R.	Grey Ridge	1330	SE(44)120756	46.17
" "	Low Ash Head	845	SE(44)140763	44.04
" "	Arnagill Beck, West	1210	SE(44)145746	43.26
" "	Arnagill Beck, East	1150	SE(44)162756	41.93
" "	Somerside	928	SE(44)143773	41.49
" "	High Sour Mire	884	SE(44)143790	39.87
" W.R.	Stone and Ears Wham	1118	SE(44)168751	40.87
" "	Bagwith Brae	703	SE(44)195747	38.59
" "	Skell Beck	900	SE(44)188688	42.32
" "	Harper Hill	819	SE(44)197702	38.61
" "	Burton Leonard	275	SE(44)330638	27.79
" N.R.	Keld	1040	NY(35)893001	59.02
" "	Rowleth End	700	SD(34)971975	45.38
" "	Richmond Green Howard Road	605	NZ(45)172016	33.38
" "	Barningham Park	750	NZ(45)092099	36.55
" "	Scruton	100	SE(44)300923	25.90
" "	Craggs Lane Farm	550	SE(44)199945	29.60
" "	Oakdale W. Wks.	600	SE(44)466966	31.78
" "	Sowerby	110	SE(44)432812	26.80
" "	Thirsk, Ashton House	112	SE(44)432809	26.56
" "	Thirlby	315	SE(44)490840	29.27
" "	Mount St. John	540	SE(44)474848	28.94
" "	Topcliffe	81	SE(44)405790	25.37
" "	Dishforth	106	SE(44)379723	24.98
" W.R.	West Houses	1165	SE(44)043766	57.76
" "	Scar House Res.	1085	SE(44)065766	48.42
" "	New Houses	755	SE(44)094768	46.27

TABLE II (Contd.)

County	Station	Alt. ft.	N.G.R.	Av.
Yorkshire Ouse				
Yorks. W.R.	East Gill Head	1730	SE(44)037738	61.22
" "	Raygill House	930	SE(44)110704	46.17
" "	Ramsgill	450	SE(44)120709	44.28
" "	Holme House	464	SE(44)128699	41.30
" "	Birstwith Hall	325	SE(44)242583	36.98
" "	Long Stoop	700	SE(44)212552	34.36
" "	Ling Cottage	763	SE(44)228521	34.01
" "	Ten Acres Res.	620	SE(44)248535	34.70
" "	Irongatebridge Res.	455	SE(44)287548	32.26
" "	Knaresborough, Water Tower	240	SE(44)348567	28.65
" "	Stockeld Park	200	SE(44)368492	28.97
" "	Tockwith	77	SE(44)468524	27.42
" "	York, Acomb Landing	40	SE(44)582526	24.75
" E.R.	York, The Retreat	60	SE(44)615508	26.56
" W.R.	Thorpe Fell	1649	SE(44)007597	52.51
" "	Trunla Hill	1145	SE(44)069657	49.12
" "	Grimwith Res.	884	SE(44)062642	46.53
" "	Upper Barden	1164	SE(44)016576	50.00
" "	Barden Res.	746	SE(44)035563	45.22
" "	Bolton Abbey	368	SE(44)072540	37.45
" "	Beamsley	420	SE(44)077529	35.31
" "	High House	1068	SE(44)136610	46.14
" "	Lane Head	950	SE(44)129588	41.99
" "	Spittle Ings	967	SE(44)135567	44.45
" "	Blubberhouses	575	SE(44)166554	39.50
" "	Timble Ings	912	SE(44)156526	39.07
" "	Fewston	525	SE(44)187543	35.73
" "	Swinsty	460	SE(44)197525	34.72
" "	Lindley Wood	312	SE(44)217486	31.84
" "	Eccup	375	SE(44)309418	32.21
" "	Harewood House	300	SE(44)308442	32.37
" "	Bramham	177	SE(44)441412	26.47
" "	Cawood	20	SE(44)561366	24.45
" "	Askham Bryan	90	SE(44)552475	26.62
" E.R.	Riccall	18	SE(44)608373	24.36
" W.R.	Brayton Barff	173	SE(44)585305	25.87
" "	Silpho Moor	665	SE(44)957946	33.64
" "	Irton P. Sta.	94	TA(54)004840	27.24
" E.R.G.	Ganton Hall	250	SE(44)992770	28.80
" "	Ganton Golf Club	100	SE(44)982781	27.93
" N.R.	Nunnington Hall	110	SE(44)671794	26.96
" "	Farndale No. 10	574	SE(44)642997	43.28
" "	Farndale No. 13	1055	SE(44)673995	41.87
" "	Farndale Vicarage	495	SE(44)672975	38.18
" "	Ampleforth	313	SE(44)598789	30.03
" "	Leysthorpe Hall	231	SE(44)636789	28.20
" "	Hutton-le-Hole, Elphield	340	SE(44)507900	33.17
" E.R.	Warter	290	SE(44)861502	29.74
" W.R.	Malham Tarn	1297	SD(34)894672	60.28
" "	Lee Gate House	1240	SD(34)926645	51.57
" "	Elslack	675	SD(34)937484	41.73
" "	Cringles Res.	715	SE(44)042491	34.35
" "	Silsden Res.	560	SE(44)045476	35.32
" "	Keighley, Hard Ings Lane	304	SE(44)068421	36.36
C. Lancs.	Watersheddles Res.	1115	SE(44)968379	55.05
" W.R.	Oldfield Filters No. 1	1008	SE(44)003379	48.89
" "	Oldfield Filters No. 2	978	SE(44)003379	48.68
" "	Harbour Lodge	1165	SD(34)996353	52.93

TABLE II. Contd.

County	Station	Alt. ft.	N.G.R.	Av.
Yorkshire Ouse				
Yorks. W.R.	Lower Laithe Res.	773	SE(44)015367	48.52
" "	Leeming Res.	850	SE(44)040340	46.37
" "	Stairs Top	1360	SE(44)004339	54.02
" "	Keighley Moor	1300	SD(34)481390	52.61
" "	Clough Hey	1075	SD(34)998394	50.07
" "	Keighley Moor No. 2	1025	SD(34)075061	52.14
" "	Newsholme Dean	675	SE(44)019404	44.03
" "	Thornton Moor Filters	1190	SE(44)051337	48.25
" "	Doe Park Res.	754	SE(44)077341	42.58
" "	Hewenden Res.	707	SE(44)072355	41.82
" "	Gilstead Filters	572	SE(44)118393	34.66
" "	Thornton Cemetery	1003	SE(44)088330	38.09
" "	Chellow Dean Res.	645	SE(44)124345	36.70
" "	Horton Park	597	SE(44)146316	35.07
" "	Bradford, Shearbridge	400	SE(44)152325	33.79
" "	Bowling Cemetery	600	SE(44)174308	35.02
" "	Bradford, Peel Park	450	SE(44)168348	33.00
" "	Bradford	439	SE(44)149352	33.57
" "	Weecher Res.	825	SE(44)136423	34.36
" "	Reva Res.	735	SE(44)153426	32.11
" "	Guiseley Moor	750	SE(44)192435	30.30
" "	Rawdon S. Wks.	150	SE(44)213380	28.17
" "	Farnley Hall	405	SE(44)248323	28.26
" "	Lawnswood Cemetery	470	SE(44)267391	30.49
" "	Leeds, Roundhay Park	425	SE(44)330383	29.76
" "	Lemonroyd S. Wks.	64	SE(44)375282	24.53
" "	Calf Lee	945	SD(34)953201	50.22
" "	Warland Res.	1245	SD(34)954215	52.54
" "	Ramsden Hill	1326	SD(34)917208	53.27
" "	Gorple Res.	900	SD(34)907229	57.62
" "	Todmorden	500	SD(34)943244	51.71
" "	Todmorden Hospital	650	SD(34)965244	51.63
" "	Eastwood S. Wks.	368	SD(34)970260	48.14
" "	Walshaw Dean No. 3	1180	SD(34)962344	57.82
" "	Widdop Res. No. 4	1060	SD(34)927327	54.51
" "	Widdop Res. No. 2	1065	SD(34)931331	54.23
" "	Widdop Res. No. 5	1280	SD(34)942348	56.73
" "	Gorple Res. No. 3	1160	SD(34)918311	53.51
" "	Gorple Res. No. 2	1275	SD(34)930301	57.59
" "	Gorple Res.	1028	SD(34)955311	55.23
" "	Coppy	1135	SD(34)957305	53.41
" "	Whiteholme	1240	SD(34)975203	49.74
" "	Byron Edge	1251	SD(34)973192	52.21
" "	Turvin No. 1	1201	SD(34)984197	50.49
" "	Warland Drain	1250	SD(34)971217	54.35
" "	Warley Moor	1325	SE(44)032312	47.75
" "	Midgley Moor	1350	SE(44)016306	47.01
" "	Castle Carr	1060	SE(44)026297	44.18
" "	Rishworth Drain	1301	SD(34)981177	50.47
" "	Baitings	943	SE(44)004190	52.32
" "	Manshead	1225	SE(44)004198	52.12
" "	Linsgreave	1264	SD(34)986143	53.60
" "	Waystone Drain	1200	SD(34)998148	55.60
" "	Great Wolden Edge No. 2	1135	SD(34)996156	52.84
" "	Long Clough	1010	SE(44)017156	54.78
" "	Rishworth Moor Lodge No. 2	950	SE(44)026165	49.80
" "	Stott Hall	935	SE(44)032161	49.24
" "	Ringstone Res.	962	SE(44)048178	48.54

TABLE II. Contd.

County	Station	Alt. ft.	N.G.R..	Av.
Yorkshire Ouse				
Yorks. W.R.	Ovenden Moor	1375	SE(44)049316	47.93
" "	Ogden Res.	990	SE(44)062306	42.34
" "	Ramsden Wood	815	SE(44)059271	43.10
" "	Deanhead Res.	1007	SE(44)039151	52.19
" "	Redbrook Res.	1150	SE(44)026102	52.03
" "	Marsden Res.	657	SE(44)046121	54.12
" "	Holly Bank Moss	1065	SE(44)064082	54.18
" "	Wessenden, Old Res.	940	SE(44)056087	52.36
" "	Bobus	1200	SE(44)035097	50,48
" "	Deerhill, No. 1	1149	SE(44)070113	51.25
" "	Blackmoorfoot	800	SE(44)096130	43.09
" "	Great Hey	1200	SE(44)104042	67.72
" "	Hey Springs	1100	SE(44)117046	63.74
" "	*Widdop Res. No. 3	1060	SD(34)924333	53.24
" "	Snape Res.	1075	SE(44)115087	47.22
" "	Boshaw Whams Res.	930	SE(44)153057	44.79
" "	Harden Moss	1212	SE(44)098086	52.94
" "	Heckmondwike	165	SE(44)220224	27.37
" "	Dewsbury, Crowsnest Park	300	SE(44)232214	27.23
" "	Mitchell Laithe.S. Wks.	115	SE(44)252202	25.56
" "	Horbury, Town Hall	250	SE(44)297185	25.76
" "	Ardsley Res. Lower	395	SE(44)287249	25.98
" "	Ardsley Res. Upper	395	SE(44)287248	26.02
" "	Wakefield S. Wks.	80	SE(44)346203	25.03
" "	Pontefract	255	SE(44)454213	23.86
" "	Roall W. Wks.	42	SE(44)568244	24.59
" "	Goole S. Wks.	10	SE(44)748250	26.20
" "	Swiner Clough Moss	1503	SE(44)126028	67.38
" "	End Springs	1450	SE(44)130022	67.79
" "	Dearden Moss	1500	SE(44)137015	65.05
" "	Dunford Bridge Res.	1081	SE(44)151023	56.79
" "	Reaps Slack	1490	SE(44)130037	65.29
" "	Harden	1204	SE(44)150035	55.46
" "	Brown's Clough No. 10	1405	SE(44)145004	63.25
" "	Stoney Gate	1087	SE(44)157010	56.23
" "	Long Grain	1125	SE(44)166019	54.27
" "	Cat Clough	889	SE(44)182025	49.71
" "	Town Brook Intake	1035	SE(44)177037	49.77
" "	Spring Head	1165	SE(44)179068	42.44
" "	Pottersgate House	1165	SE(44)190063	41.88
" "	Broadstone Res.	1030	SE(44)195062	44.26
" "	Gringley Carr	1090	SE(44)201050	43.02
" "	Ingbirchworth Res.	853	SE(44)213056	38.96
" "	Royd Moor	835	SE(44)222045	38.32
" "	Fiddlers Green	1480	SK(43)150993	56.65
" "	Fiddlers Green No. 1	1493	SK(43)152999	56.01
" "	Laund Clough	1515	SK(43)157990	60.00
" "	Catclough	1516	SK(43)172984	57.90
" "	Mickleden Edge No. 37	1110	SK(43)190985	55.62
" "	Mickleden No. 1	1217	SK(43)192988	31.52
" "	Swinden Lodge	1032	SE(44)189009	46.53
" "	Flouch Road	960	SE(44)205004	44.04
" "	Langsett Res.	820	SE(44)211003	41.68
" "	Midhope	830	SK(43)219994	46.02
" "	Barnside	1000	SK(43)229984	48.47
" "	Brookholes	902	SE(44)227011	38.31
" "	Margery Hill	1784	SK(43)189957	55.25
" "	Candle Rush	1400	SK(43)203965	52.12

TABLE II. Contd.

County	Station	Alt. ft.	N.G.R.	Av.
Yorkshire Ouse				
Yorks. W.R.	Middle Moss	1600	SK(43)207949	52.94
" "	Broomhead Moor	1370	SK(43)224956	40.09
" "	Brown Edge	1325	SK(43)220969	49.76
" "	Broomhead Hall	900	SK(43)242463	40.06
" "	Canyard Brook	585	SK(43)261957	40.66
" "	Broomhead Res. No. 1	585	SK(43)268961	38.00
" "	White Lee Moor	1170	SK(43)265946	43.43
" "	Morehall Res.	408	SK(43)289957	33.70
" "	Brogging Moss	1360	SK(43)211917	52.40
" "	Thornseat	1326	SK(43)230923	45.72
" "	Dale Dike Res.	715	SK(43)242917	43.35
" "	Bradfield Filters	551	SK(43)261916	39.61
" "	Hobson Moss	1530	SK(43)217946	49.89
" "	Emlin Moor	998	SK(43)247934	44.94
" "	Rocher Flat	1106	SK(43)267935	39.89
" "	Crawshaw Wood	1175	SK(43)252887	42.16
" "	Oaking Clough No.2	1185	SK(43)246862	44.27
" "	Black Clough	1175	SK(43)235876	46.42
" "	Middle Moss	1168	SK(43)243871	45.56
" "	Redmires Res. No. 3	1110	SK(43)262857	42.57
" "	Sheffield	429	SK(43)339873	30.66
" "	Greenoside	560	SK(43)336935	28.97
" "	Wincobank S. Wks.	110	SK(43)395917	24.41
" "	Kimberworth School	285	SK(43)407930	25.47
Derbys.	Hunger Hill	643	SK(43)329679	35.30
"	Whispering Well	575	SK(43)332694	35.65
"	Upper Linacre Filters	521	SK(43)339727	33.36
"	Chesterfield	298	SK(43)384717	29.21
"	Crowhole Res.	605	SK(43)321748	31.24
"	Chesterfield S. Wks.	225	SK(43)392745	29.77
"	Bolsover	275	SK(43)463710	29.29
Yorks. W.R.	Woodhouse	243	SK(43)414843	29.08
" "	Ulley Res. No. 2	184	SK(43)455874	24.56
" "	Ulley Res. No. 3	132	SK(43)453876	24.84
" "	Rotherham	282	SK(43)435923	24.74
" "	Aldwarke S. Wks.	71	SK(43)444943	25.00
" "	Cannon Hall	350	SE(44)273084	29.05
" "	Barnsley Queens Road	310	SE(44)348063	26.63
" "	Worsborough Dale	150	SE(44)363035	26.48
" "	Darfield S. Wks.	83	SE(44)421038	24.80
" "	Wath Wood Res.	330	SK(43)437993	24.37
" "	Doncaster P. Sta.	31	SE(44)576040	24.60
" "	Sandall S. Wks.	41	SE(44)601060	23.62
" "	Bentley Colliery	22	SE(44)571073	24.38
" "	Kirk Bramwith	22	SE(44)618115	23.06
" "	Thorne	15	SE(44)675145	22.74
" "	Fitzwilliam	246	SE(44)417157	23.49
" "	Black Drain P. Sta.	10	SE(44)690207	23.96
" "	Goole, Docks Office	18	SE(44)745235	24.53

TABLE III. Monthly Averages of Rainfall, (in inches) 1916-1950, estimated for Short-period stations

County	Station	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year
Yorks. N.R.	Whitby	2.53	1.92	1.63	1.61	1.90	1.82	2.53	2.74	2.13	2.40	2.64	2.50	26.35
" E.R.	High Mowthorpe	2.39	1.99	2.27	1.90	2.30	2.36	2.91	3.16	2.05	3.52	2.82	2.97	30.64
" W.R.	Burton Leonard	2.78	2.14	1.72	1.95	2.17	1.72	2.59	2.61	2.28	2.64	2.72	2.47	27.79
" "	Scruton	2.41	1.94	1.61	1.76	1.99	1.84	2.54	2.59	2.28	2.41	2.38	2.15	25.90
" N.R.	Dishforth Airfield	2.42	1.75	1.50	1.65	1.92	1.77	2.47	2.50	2.10	2.35	2.35	2.20	24.98
" "	Raygill House	5.26	3.94	2.81	3.04	2.90	2.59	3.82	3.94	3.74	4.66	5.04	4.43	46.27
" W.R.	Acomb Landing	2.40	1.76	1.43	1.68	1.81	1.76	2.45	2.47	2.01	2.30	2.47	2.21	24.75
" "	Bramham	1.99	1.64	1.85	1.72	2.14	2.23	2.73	2.75	1.77	2.91	2.28	2.46	26.47
" "	Askham Bryan	2.47	1.77	1.51	1.82	2.11	1.92	2.60	2.68	2.16	2.32	2.50	2.16	26.02
" N.R.	Farndale Vicarage	3.70	2.71	2.45	2.56	2.67	2.67	3.70	3.70	3.06	3.55	3.97	3.44	38.18
" "	Ampleforth	2.91	2.13	1.83	1.98	2.19	2.13	2.92	3.07	2.55	2.73	2.98	2.61	30.03
" "	Oswaldkirk	2.91	2.16	1.73	1.85	2.13	2.02	2.68	2.91	2.34	2.59	2.88	2.62	28.20
" W.R.	Lower Laithe Res.	5.34	4.07	2.86	3.06	3.30	2.81	3.79	4.41	3.98	5.00	5.29	4.61	48.52
" "	Thornton Moor Filters	5.31	4.05	2.84	3.04	3.14	2.80	3.67	4.39	3.96	5.11	5.31	4.63	48.25
" "	Bingley	3.75	2.96	2.14	2.43	2.50	2.11	3.00	3.25	2.85	3.60	3.75	3.35	35.69
" "	Bradford (Lister Park)	3.52	2.79	2.12	2.32	2.45	2.01	2.92	3.02	2.59	3.29	3.52	3.02	33.57
" "	Ringstone Res.	5.19	4.03	3.06	3.20	3.16	2.86	3.69	4.37	4.08	5.15	5.19	4.56	48.54
" "	Roall W. Wks.	2.19	1.72	1.43	1.72	2.09	1.72	2.53	2.56	2.04	2.18	2.39	2.02	24.59
" "	Langsett Res.	4.63	3.50	2.75	2.96	3.08	2.13	3.37	3.46	3.25	4.17	4.59	3.79	41.68
" "	More Hall Res.	3.13	2.43	2.12	2.53	2.83	2.26	3.27	3.20	2.76	3.17	3.20	2.80	33.70
" "	Sheffield	3.04	2.39	1.99	2.09	2.30	1.87	2.76	2.79	2.33	2.97	3.22	2.91	30.66
" "	Coisley Hill S. Wks.	2.75	2.22	1.83	1.97	2.13	1.77	2.55	2.75	2.16	2.58	2.84	2.53	28.08
" "	Rotherham	2.35	1.93	1.63	1.73	1.90	1.61	2.33	2.45	1.98	2.23	2.45	2.15	24.74
" "	Wath Wood Res.	2.19	1.88	1.58	1.71	1.97	1.66	2.36	2.44	1.95	2.22	2.36	2.05	24.37

TABLE IVa 35-year Daily Totals of Rainfall (in inches), 1916-1950

Scarborough

Day	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec
1	3.57	2.04	2.20	2.82	1.01	2.04	1.37	1.61	6.80	1.87	3.24	2.90
2	2.39	2.75	1.73	3.80	2.42	3.28	2.54	3.13	2.21	2.30	3.34	2.51
3	3.05	3.21	2.13	2.71	1.70	2.51	1.62	.76	3.23	1.99	2.54	2.67
4	2.88	1.99	1.27	3.69	1.57	1.43	2.90	1.95	2.30	2.95	2.11	3.61
5	2.18	1.90	1.63	1.73	3.15	1.21	2.85	5.82	1.05	2.26	3.23	2.97
6	2.64	1.30	1.15	1.48	1.84	1.95	3.82	3.98	2.15	1.67	2.92	3.29
7	3.36	2.23	1.90	1.10	1.48	1.46	2.96	2.61	1.35	2.10	4.90	2.61
8	2.54	1.71	1.17	1.86	1.98	1.52	2.24	4.09	2.59	2.68	1.44	3.05
9	4.00	2.35	2.96	2.91	1.56	1.54	2.32	2.82	2.00	3.26	3.63	2.61
10	3.70	2.62	1.34	3.13	1.20	1.53	4.78	3.08	2.29	2.02	2.75	1.85
11	3.31	1.80	2.79	2.54	3.31	1.92	2.36	2.28	.70	2.64	4.07	3.74
12	2.95	2.35	3.03	.95	2.99	2.80	1.78	3.70	2.89	2.55	3.08	1.67
13	1.64	1.48	1.46	1.82	1.72	2.50	3.08	2.58	3.11	1.53	2.63	2.33
14	3.06	1.66	1.89	1.98	1.43	4.65	1.80	1.77	2.61	1.14	2.88	4.06
15	3.18	2.44	1.58	1.98	1.96	1.26	4.24	3.96	1.79	.84	2.58	3.06
16	2.61	1.47	2.09	1.72	2.65	2.76	3.72	1.92	1.84	1.66	3.06	3.00
17	2.40	1.51	2.63	2.02	2.49	2.15	3.65	.83	2.88	2.71	3.06	1.34
18	4.87	2.26	1.17	2.49	2.26	3.33	2.48	2.86	1.78	1.59	4.87	1.71
19	2.21	2.13	1.92	2.18	.85	2.50	1.45	2.88	4.53	2.00	3.30	1.77
20	2.26	2.23	1.37	1.63	2.65	1.18	3.18	6.04	3.50	2.22	2.75	2.51
21	2.85	1.85	2.18	.62	3.08	1.91	4.14	3.92	1.90	3.02	3.07	3.15
22	2.36	3.29	1.25	1.07	1.82	1.79	4.09	.85	2.48	3.25	1.90	2.14
23	2.31	1.37	1.55	2.02	2.43	1.70	2.48	1.68	2.19	2.78	2.33	2.20
24	3.30	2.63	1.04	2.11	2.50	1.02	2.87	3.86	4.07	4.17	1.97	1.94
25	2.68	1.98	1.44	2.05	1.48	1.89	3.30	2.46	2.62	3.83	2.88	2.45
26	2.07	4.09	1.47	1.87	2.42	1.40	4.43	3.24	2.51	4.38	2.87	3.09
27	2.01	2.23	1.36	2.06	2.86	2.13	2.00	2.69	1.30	4.32	4.22	2.57
28	3.25	3.53	1.51	1.52	1.84	.96	3.13	4.89	1.36	2.72	3.53	2.43
29	4.09	.52	2.61	2.34	2.29	1.56	2.58	3.98	1.20	3.04	2.55	4.04
30	1.70	-	.75	.97	1.48	1.56	2.11	2.04	1.76	3.23	1.41	4.94
31	3.40	-	1.09	-	2.16	-	2.41	2.54	-	3.03	-	3.02

TABLE IVa. 35-year Daily Totals of Rainfall (in inches) 1916-1950

Holme-on-Spalding Moor

Day	Jan	Feb	May	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec
1	3.92	2.10	2.55	3.06	1.22	2.29	1.52	1.59	3.69	1.58	3.59	2.15
2	1.85	3.83	2.15	3.21	1.01	3.15	1.48	2.79	3.33	1.93	3.38	2.87
3	2.70	2.70	1.46	1.91	1.19	2.49	3.12	1.96	3.32	2.85	2.39	1.66
4	1.39	1.31	2.09	2.43	2.34	1.57	2.55	2.69	1.61	2.97	2.36	3.99
5	1.91	2.10	1.60	1.81	4.01	2.29	3.42	4.58	1.50	1.94	3.52	1.82
6	2.35	2.36	1.28	1.97	2.20	1.77	2.84	3.36	2.67	2.38	2.06	2.77
7	2.88	1.97	1.93	1.55	2.24	2.62	4.01	3.58	2.51	2.96	2.96	2.85
8	2.81	2.08	1.88	1.56	1.38	1.57	2.71	4.14	1.16	2.82	1.52	3.36
9	3.27	3.56	1.85	2.54	1.55	1.80	3.58	3.87	1.70	4.37	3.91	2.66
10	3.99	1.88	1.90	2.21	1.18	1.88	4.37	4.36	2.27	4.05	3.17	1.84
11	3.71	2.10	2.87	1.99	2.77	1.52	1.43	2.75	.69	2.56	4.50	2.80
12	2.90	2.42	2.52	1.28	2.24	3.00	3.57	3.00	3.01	1.57	1.90	1.08
13	1.21	1.38	.84	2.46	1.79	3.34	4.44	1.72	3.33	3.10	2.42	2.08
14	3.05	1.40	1.48	1.67	1.53	4.08	2.86	2.28	2.87	1.61	4.21	3.15
15	2.97	2.00	1.81	2.04	2.39	2.93	5.52	1.89	1.34	.83	2.95	2.64
16	1.57	2.53	2.09	2.23	3.10	3.11	5.99	2.67	2.19	1.81	3.06	2.12
17	2.02	1.32	1.87	3.21	2.80	1.54	4.60	1.93	3.50	2.21	3.30	1.44
18	3.94	1.85	1.05	2.60	2.04	4.26	3.82	3.59	2.24	1.82	6.11	1.51
19	2.60	2.49	1.84	2.43	1.28	3.22	3.02	4.48	4.19	1.76	3.21	2.35
20	1.85	1.72	1.47	2.21	1.83	1.88	3.85	4.14	4.21	2.40	3.09	2.19
21	3.18	1.54	1.71	1.35	5.35	2.05	2.53	2.10	1.68	3.00	3.61	3.01
22	2.57	2.25	1.77	.80	2.10	2.79	2.32	1.61	2.86	4.52	2.05	2.57
23	2.20	.79	2.33	2.37	2.74	1.47	2.17	1.95	3.63	3.52	2.54	2.21
24	2.57	2.55	1.20	1.99	2.03	.82	2.20	3.70	4.31	2.68	1.91	1.92
25	3.17	3.18	1.50	2.44	1.74	1.42	2.08	3.20	1.87	4.66	1.76	1.96
26	2.83	3.82	1.09	2.20	3.15	1.84	3.66	3.73	1.82	3.18	2.34	3.53
27	2.09	3.15	.88	1.87	2.67	2.25	2.64	2.79	1.36	3.09	3.60	3.02
28	4.08	2.69	1.49	1.53	2.64	2.03	5.21	5.50	1.27	2.92	3.23	3.24
29	3.52	.53	1.51	1.55	3.29	1.93	3.10	3.56	1.48	4.52	2.04	3.04
30	2.15	-	1.53	1.71	2.01	1.22	1.61	1.95	1.81	2.24	1.91	3.80
31	3.31	-	1.12	-	2.11	-	1.73	2.13	-	3.36	-	2.97

TABLE IVa. 35-year Daily Totals of Rainfall (in inches) 1916-1950

Bradford

Day	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec
1	7.96	4.32	2.94	4.78	2.30	3.85	3.14	3.29	4.07	1.91	6.31	3.89
2	3.13	5.04	1.85	3.81	1.78	4.44	1.79	3.11	3.69	3.49	3.63	3.67
3	3.61	4.02	1.66	2.55	2.05	2.22	5.35	2.05	4.47	3.20	3.25	3.20
4	3.60	3.27	3.35	3.86	3.02	1.35	2.89	3.38	3.14	4.63	2.91	6.08
5	3.74	3.93	3.28	2.33	3.02	2.61	3.26	5.05	.89	2.63	4.89	3.83
6	4.61	4.28	2.05	2.25	3.58	2.97	3.16	4.34	2.40	3.62	3.51	3.67
7	3.21	3.26	2.98	2.43	2.34	3.64	3.45	5.35	2.01	3.41	3.31	3.76
8	2.89	3.49	2.45	2.47	1.71	1.71	3.54	4.57	2.04	3.76	2.57	3.19
9	5.33	6.20	1.98	4.47	2.22	2.18	2.49	2.30	2.40	6.42	4.39	3.55
10	5.24	5.02	2.51	2.49	2.90	1.49	2.47	4.00	2.80	4.22	2.94	3.63
11	5.07	4.55	3.58	2.07	1.54	1.92	3.35	3.31	1.51	2.88	6.42	2.73
12	5.70	3.67	3.26	2.78	3.04	3.71	4.00	2.70	4.21	2.89	4.00	.98
13	1.77	1.61	1.44	3.01	2.41	4.02	4.21	2.16	3.65	3.37	4.39	2.77
14	4.51	2.00	.96	3.11	1.24	3.55	1.92	2.43	2.57	1.49	4.83	4.21
15	4.69	4.32	1.75	3.01	2.42	1.17	6.13	2.22	3.47	2.19	3.94	3.82
16	3.12	4.33	2.47	2.17	2.15	1.74	4.31	2.36	3.22	1.54	6.13	2.69
17	4.31	1.71	2.46	2.79	3.98	2.27	2.61	3.01	4.23	3.63	3.03	2.06
18	7.32	2.84	1.81	1.48	2.49	2.38	2.83	5.15	2.24	2.94	6.11	1.81
19	3.09	3.08	3.94	2.56	2.86	2.02	4.11	3.86	5.94	3.07	4.62	1.98
20	3.35	2.53	2.71	3.09	2.98	.98	4.58	3.90	2.83	2.26	4.22	3.02
21	4.27	1.93	1.70	1.77	2.45	1.72	3.24	3.80	2.59	5.44	4.13	3.23
22	4.81	3.80	2.44	1.34	2.18	3.17	4.37	2.31	3.71	3.56	3.00	2.84
23	2.35	1.39	2.28	4.10	4.25	1.69	2.83	3.28	2.19	4.32	6.00	3.33
24	4.38	4.05	1.84	2.39	2.22	1.25	2.28	3.03	4.05	4.25	2.71	3.20
25	3.84	4.28	2.76	3.28	1.93	1.47	2.62	2.81	2.10	5.02	3.44	3.80
26	3.78	4.07	2.38	1.60	3.78	1.13	3.64	2.43	1.88	5.28	2.65	4.02
27	4.44	5.25	2.01	2.61	3.42	2.85	2.59	3.11	2.16	3.11	3.55	4.22
28	6.65	2.55	2.02	2.13	2.61	1.60	3.84	4.54	.96	3.24	2.85	5.13
29	4.67	.72	2.98	1.93	4.26	2.40	3.33	4.45	1.50	5.92	2.86	6.41
30	3.33	-	2.09	.83	4.13	2.10	1.40	2.13	2.03	3.92	3.49	4.96
31	5.12	-	3.10	-	3.23	-	1.95	1.75	-	3.20	-	3.11

TABLE IVa.. 35-year Daily Totals of Rainfall (in inches) 1916-1950

Wakefield Clarence Park

Day	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec
1	3.59	2.36	2.00	3.31	2.41	2.33	2.44	1.87	3.60	1.40	4.18	2.02
2	1.65	3.33	2.06	3.19	1.62	3.66	1.01	2.69	2.79	1.71	2.72	2.34
3	3.13	3.68	1.19	2.21	1.77	1.67	3.14	1.88	3.76	3.10	2.39	1.65
4	1.74	1.86	2.96	3.46	2.71	1.30	2.56	2.16	2.79	3.23	1.94	4.32
5	2.25	1.71	1.92	1.91	3.19	2.22	2.92	5.21	.68	2.79	3.53	2.16
6	2.65	3.26	1.36	1.88	3.32	1.49	3.64	3.99	2.82	2.65	2.40	2.49
7	2.58	2.19	2.26	1.83	2.36	2.98	2.81	5.12	1.54	3.23	3.03	2.94
8	2.67	2.99	2.11	1.91	1.80	1.84	3.09	4.32	1.33	2.75	1.83	2.20
9	4.06	3.82	2.36	3.26	2.10	1.72	2.92	3.33	2.41	5.87	3.74	2.13
10	3.61	2.78	1.69	2.11	2.43	1.23	3.55	3.58	2.01	3.22	2.61	1.76
11	3.64	2.89	3.54	1.69	2.27	1.36	1.15	3.54	1.55	2.26	4.36	2.22
12	2.65	2.57	3.49	1.96	2.70	2.85	3.08	2.80	2.71	1.85	2.64	.95
13	1.51	1.46	1.13	2.13	2.32	3.90	2.84	1.30	3.36	2.69	2.80	1.68
14	3.03	1.22	1.19	2.58	1.27	3.37	3.04	2.67	3.02	1.47	3.88	3.12
15	3.21	2.13	2.39	1.79	1.55	1.05	3.33	1.27	2.47	1.41	3.56	1.58
16	1.76	3.06	1.84	1.72	2.38	1.54	5.24	1.61	2.27	1.48	4.95	2.00
17	2.72	1.70	2.33	2.75	2.19	1.66	2.85	2.17	2.67	2.53	2.56	1.24
18	4.73	2.00	1.08	2.16	2.26	3.08	2.83	3.67	1.90	2.24	6.19	1.27
19	2.56	3.19	2.87	1.36	2.68	2.02	2.92	3.51	4.79	2.11	3.87	2.56
20	2.10	2.30	1.59	1.87	3.66	1.65	3.67	4.39	2.58	1.73	3.07	2.26
21	3.00	1.33	1.67	1.26	3.81	1.45	2.74	3.19	1.74	4.27	3.28	2.09
22	2.38	2.44	1.49	1.14	2.13	1.62	3.11	1.21	3.12	3.58	1.86	2.36
23	1.51	1.04	2.09	2.39	2.91	1.11	2.34	3.13	2.39	3.72	3.71	2.91
24	2.82	4.09	1.02	1.70	1.89	1.11	1.08	2.97	3.42	2.86	2.15	3.02
25	2.47	4.17	2.37	2.64	1.86	1.71	1.76	2.28	1.90	3.96	1.69	1.59
26	3.69	3.67	1.41	1.52	5.25	.98	4.24	2.51	1.79	2.78	2.37	2.57
27	3.18	3.24	1.47	1.97	2.44	2.09	1.90	3.48	1.73	2.52	2.52	3.44
28	4.51	2.94	1.17	2.06	2.00	.85	4.35	4.39	1.09	1.45	2.61	3.23
29	3.20	.88	1.81	2.76	4.04	1.79	2.82	3.62	1.65	4.86	1.20	4.16
30	2.73	-	1.71	.96	2.92	1.28	.86	1.94	2.57	2.53	2.17	3.47
31	3.25	-	2.24	-	2.27	-	1.80	1.94	-	3.17	-	1.91

TABLE IVa. 35-year Daily Totals of Rainfall (in inches) 19161950

York

Day	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec
1	3.61	1.69	2.05	2.84	1.10	2.64	2.06	1.90	5.29	1.69	4.74	1.90
2	1.59	3.22	1.59	3.26	1.27	3.19	1.42	2.94	3.29	2.59	3.16	2.23
3	2.11	2.28	1.55	2.06	1.29	2.46	2.83	1.37	3.28	2.75	2.18	1.22
4	1.35	1.75	2.25	3.11	2.26	1.88	2.53	1.91	3.63	3.85	2.26	3.58
5	1.55	1.58	1.23	1.87	2.75	1.89	3.47	3.54	1.16	2.10	2.76	2.15
6	2.40	1.89	1.04	1.89	2.24	2.27	3.32	3.48	3.39	2.09	2.37	1.94
7	3.06	1.58	1.60	1.50	2.20	3.29	2.17	4.78	1.76	2.60	2.82	2.46
8	2.20	1.94	1.10	1.39	1.61	1.85	2.58	4.88	1.16	2.26	1.10	2.52
9	3.84	3.20	2.51	2.50	1.79	1.95	2.29	2.09	1.85	4.27	4.12	2.62
10	2.86	1.81	1.87	2.31	1.41	2.20	3.30	3.59	2.09	2.35	2.11	1.68
11	3.83	2.19	2.19	1.41	3.01	1.04	1.80	4.19	.54	2.20	4.02	2.73
12	3.18	2.52	2.41	1.15	2.63	3.28	2.95	3.49	3.09	1.88	2.02	.94
13	1.36	1.32	.86	2.47	2.21	3.27	3.24	1.97	2.79	2.67	2.20	1.98
14	2.95	1.06	1.33	1.89	1.26	3.64	2.55	2.44	2.20	1.13	4.14	3.20
15	3.41	2.08	1.76	1.89	1.58	.68	4.73	2.56	1.77	.97	3.39	3.74
16	1.63	1.89	2.01	1.67	2.04	2.26	4.24	3.03	2.73	1.53	3.69	1.78
17	1.63	1.06	1.90	2.90	3.72	1.63	4.14	2.64	2.72	2.31	2.46	1.11
18	4.27	1.61	1.05	2.24	2.33	4.92	2.46	3.32	2.00	1.41	5.09	1.55
19	2.05	2.24	1.88	1.87	1.51	1.97	3.44	3.01	3.40	2.02	3.05	1.90
20	2.04	2.05	2.21	1.85	1.98	1.78	3.16	4.32	3.18	2.16	2.96	1.99
21	2.82	1.08	1.43	1.25	4.33	2.20	3.02	2.75	2.44	3.04	2.86	2.81
22	2.83	1.89	2.02	1.07	1.86	2.38	2.66	.99	2.29	3.95	1.56	1.76
23	2.37	.56	1.10	2.25	2.72	1.41	2.21	1.68	2.91	3.53	2.82	2.85
24	2.21	2.45	1.23	2.30	1.88	1.13	1.45	3.15	4.27	2.54	1.60	2.27
25	2.61	3.44	1.55	2.27	1.13	1.14	2.21	2.21	1.54	4.15	1.71	1.38
26	3.14	3.32	1.20	1.59	3.30	1.36	3.93	3.71	1.90	2.85	1.95	2.37
27	2.34	4.50	1.32	1.89	2.58	3.06	2.70	3.50	1.58	2.34	3.04	3.09
28	4.21	1.97	1.09	1.61	1.82	.98	3.68	4.21	1.34	1.73	2.38	2.36
29	3.08	.50	1.71	1.55	4.69	2.07	2.91	3.77	1.64	4.18	2.33	3.73
30	2.50	-	1.16	1.03	1.93	1.12	1.34	2.03	1.63	1.98	1.69	2.95
31	2.87	-	1.72	-	2.40	...	1.98	1.62	-	2.31	-	2.24

TABLE IVa (Contd.) Settle. *

Day	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec
1	10.81	6.40	2.68	5.08	1.90	3.54	3.61	4.98	6.22	3.73	8.40	7.76
2	6.53	5.62	2.52	4.61	1.98	4.42	3.38	3.59	5.73	5.98	6.63	6.46
3	4.85	5.26	2.82	3.47	2.13	3.29	3.97	2.43	5.79	5.80	6.31	5.30
4	6.20	4.70	3.96	3.82	3.24	3.38	5.04	3.28	3.11	5.80	5.71	7.55
5	5.56	5.71	4.04	3.35	3.64	3.20	5.64	5.33	4.13	8.35	5.79	5.62
6	7.78	6.14	2.43	2.48	4.42	3.21	3.30	4.37	3.52	6.08	4.45	4.33
7	6.82	6.20	3.82	3.20	2.75	3.18	6.86	4.73	3.39	4.91	5.14	5.77
8	7.11	6.46	2.54	4.27	2.04	2.69	2.86	6.66	3.26	7.39	3.42	4.14
9	9.45	7.67	1.91	4.40	1.94	3.60	3.87	3.71	2.66	10.67	6.23	4.61
10	6.09	5.91	3.67	2.83	4.30	2.01	4.16	5.25	3.81	8.49	5.34	3.08
11	7.70	4.73	1.76	3.01	2.93	2.08	2.33	5.08	2.02	4.20	7.68	3.39
12	8.06	6.50	2.48	4.07	4.33	2.14	3.43	3.91	6.51	5.35	5.80	2.37
13	3.77	1.85	1.81	3.98	2.10	2.98	4.13	4.59	5.42	5.82	7.53	5.54
14	7.06	4.64	1.13	4.41	2.75	5.10	2.79	5.29	3.13	3.39	7.62	6.59
15	6.81	6.90	2.17	4.81	3.46	2.04	6.46	5.09	5.77	4.27	4.76	5.92
16	6.60	4.15	4.14	2.92	2.02	1.84	5.52	5.32	8.31	2.61	5.93	3.10
17	5.94	1.90	4.15	2.86	4.57	2.72	4.54	4.96	7.37	7.47	4.77	3.79
18	6.24	2.48	3.50	1.54	3.65	4.09	3.79	4.46	4.35	6.36	6.26	4.49
19	3.86	4.03	3.46	3.06	1.95	2.23	2.78	5.52	8.23	4.11	4.84	3.17
20	5.48	4.25	2.85	2.39	2.96	2.73	3.20	9.10	6.70	3.21	4.35	3.33
21	4.92	2.69	3.06	1.89	2.54	2.26	3.98	8.24	5.23	6.24	5.56	5.32
22	5.54	5.18	2.73	2.73	2.63	3.90	5.09	3.99	5.91	4.16	6.10	4.31
23	3.85	1.73	2.98	4.84	5.15	2.48	3.64	4.34	2.95	6.27	7.61	3.57
24	5.75	2.91	2.42	2.89	2.33	1.59	3.78	4.46	5.91	9.16	4.53	3.86
25	4.05	4.58	3.11	4.42	2.44	1.77	3.94	4.80	3.89	6.81	5.76	4.35
26	3.90	4.74	2.58	2.38	3.39	2.22	4.03	4.32	2.73	7.47	4.25	7.00
27	4.20	5.64	3.25	2.68	3.34	4.80	5.45	6.36	2.53	5.83	5.66	6.04
28	6.07	4.07	3.05	1.79	3.52	4.05	5.46	5.88	2.95	4.68	3.02	9.53
29	6.11	.74	5.32	1.41	4.34	3.33	5.83	7.25	1.69	7.99	3.42	9.27
30	4.80	-	2.76	1.98	3.25	3.71	4.40	2.97	4.47	5.81	6.94	6.70
31	8.00	-	4.08	-	4.12	-	2.83	3.54	-	4.66	-	6.07

* This station, from the Lancashire River Board Area, has been included to represent the extreme west of the Yorkshire River Board area.

Table IVb Rainfall totals in inches, divided by 35, thus giving 35-year means ranging from 'trace' to .70 in., for use with table IVa.

Totals in inches x	35 yr means $x/35$		Totals in inches x	35 yr means $x/35$
- .17	'trace'		12.43 - 12.77	.36
.18 - .52	.01		12.78 - 13.12	.37
.53 - .87	.02		13.13 - 13.47	.38
.88 - 1.22	.03		13.48 - 13.82	.39
1.23 - 1.57	.04		13.83 - 14.17	.40
1.58 - 1.92	.05		14.18 - 14.52	.41
1.93 - 2.27	.06		14.53 - 14.87	.42
2.28 - 2.62	.07		14.88 - 15.22	.43
2.63 - 2.97	.08		15.23 - 15.57	.44
2.98 - 3.32	.09		15.58 - 15.92	.45
3.33 - 3.67	.10		15.93 - 16.27	.46
3.68 - 4.02	.11		16.28 - 16.62	.47
4.03 - 4.37	.12		16.63 - 16.97	.48
4.38 - 4.72	.13		16.98 - 17.32	.49
4.73 - 5.07	.14		17.33 - 17.67	.50
5.08 - 5.42	.15		17.68 - 18.02	.51
5.43 - 5.77	.16		18.03 - 18.37	.52
5.78 - 6.12	.17		18.38 - 18.72	.53
6.13 - 6.47	.18		18.73 - 19.07	.54
6.48 - 6.82	.19		19.08 - 19.42	.55
6.83 - 7.17	.20		19.43 - 19.77	.56
7.18 - 8.52	.21		19.78 - 20.12	.57
7.53 - 7.87	.22		20.13 - 20.47	.58
7.88 - 8.22	.23		20.48 - 20.82	.59
8.23 - 8.57	.24		20.83 - 21.17	.60
8.58 - 8.92	.25		21.18 - 21.52	.61
8.93 - 9.27	.26		21.53 - 21.87	.62
9.28 - 9.62	.27		21.88 - 22.22	.63
9.63 - 9.97	.28		22.23 - 22.57	.64
9.98 - 10.32	.29		22.58 - 22.92	.65
10.33 - 10.67	.30		22.93 - 23.27	.66
10.68 - 11.02	.31		23.28 - 23.62	.67
11.03 - 11.37	.32		23.63 - 23.97	.68
11.38 - 11.72	.33		23.98 - 24.32	.69
11.73 - 12.07	.34		24.33 - 24.67	.70
12.08 - 12.42	.35			

TABLE V. Accumulated Frequencies of Daily Rainfall Amounts, 1916-1950

Scarborough

Daily Totals (in inches)	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	All Months
2.90							1						1
2.50							1						1
2.40							1						1
2.30							1						1
2.20							1						1
2.10							1						1
2.00							1						1
1.90							1						1
1.80							1						1
1.70							1	1	1				3
1.60					1		2	1	1				5
1.50					1		3	2	1		1		8
1.40					2		4	3	1		2		12
1.30					3		5	3	2		2		15
1.20			1		3		6	4	3	2	3		22
1.10			1		5	2	7	5	4	2	4		30
1.00	2	1	1		5	3	9	7	5	4	5	3	45
0.90	3	1	1	2	5	4	12	9	6	5	6	4	58
0.80	4	2	1	2	5	6	15	16	7	9	10	5	82
0.70	6	3	1	2	8	7	22	27	10	10	13	7	116
0.60	15	6	4	6	15	10	31	32	18	17	20	11	185
0.50	22	11	11	13	18	18	39	45	21	26	28	22	274
0.40	45	21	21	28	35	30	54	67	43	44	39	43	470
0.30	91	48	40	50	58	54	81	98	69	76	77	74	816
0.20	152	112	87	104	99	106	140	152	116	130	145	144	1487
0.10	297	215	117	217	200	189	237	238	210	255	296	289	2760
0.005	597	535	491	504	460	415	488	478	487	557	608	628	6248
*0.004	488	454	594	546	625	635	597	607	563	528	442	457	6536
Total No. of days.	1085	989	1085	1050	1085	1050	1085	1085	1050	1085	1050	1085	12784

* Including rainless days

TABLE V. Accumulated Frequencies of Daily Rainfall Amounts 1916-1950

Holme-on-Spalding Moor

Daily Totals (in inches)	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year
3.50					1								1
2.50					1								1
2.40					1								1
2.30					1								1
2.20					1		1						2
2.10					1		1						2
2.00					1		1						2
1.90					1		1						2
1.80					1		1			1			3
1.70					1		2			1			4
1.60					1		2	1		1			5
1.50					1		3	1		1			6
1.40					1	2	5	1		1			10
1.30					1	3	5	2	1	1			13
1.20					1	4	7	3	1	1	1		18
1.10					1	5	11	5	3	1	1		27
1.00	1				1	5	12	5	4	2	2		32
0.90	1		1	1	2	8	14	8	4	4	5		48
0.80	3	2	1	1	5	10	19	15	9	9	6	2	82
0.70	10	6	2	4	7	12	26	20	11	16	11	4	129
0.60	18	11	4	8	15	15	36	25	16	21	17	8	184
0.50	27	18	8	12	22	25	55	41	30	29	30	15	312
0.40	48	37	19	23	33	37	71	65	52	60	52	29	526
0.30	78	62	41	51	64	69	104	100	72	90	82	73	886
0.20	139	112	74	100	122	115	162	169	129	132	154	136	1544
0.10	279	216	168	226	223	210	263	271	227	256	290	285	2914
0.005	627	491	466	47?	461	431	495	511	465	558	616	603	6203
* 0.004	458	498	619	571	624	619	590	574	585	527	434	482	6581
Total No. of days	1085	989	1085	1050	1085	1050	1085	1085	1050	1085	1050	1085	12784

* Including rainless days

TABLE V. Accumulated Frequencies of Daily Rainfall Amounts 1916-1950

Bradford

Daily Totals (in inches)	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	All Months
2.50													
2.40													
2.30	1												1
2.20	1						1		1				3
2.10	1						1		1				3
2.00	1				1		1	1	1				5
1.90	1				1		1	1	1		1		6
1.80	1		1		1		1	1	1		1		7
1.70	1		1		1		2	3	1	1	1		11
1.60	2		1		1		3	3	1	1	1		13
1.50	2		1		1	1	4	3	2	1	2		17
1.40	2		1		1	1	4	3	2	1	2		17
1.30	2	1	1	1	1	1	6	3	2	2	3		23
1.20	3	2	2	1	2	2	6	3	4	5	3	1	34
1.10	7	2	2	1	2	4	6	4	7	6	4	1	46
1.00	10	3	5	2	4	6	8	7	8	8	7	1	69
0.90	16	3	9	2	7	9	17	13	12	13	13	3	117
0.80	23	14	10	6	11	12	24	19	17	21	19	8	184
0.70	30	20	10	9	14	13	29	29	20	29	25	14	242
0.60	48	40	16	14	21	17	43	38	27	46	48	33	391
0.50	65	53	26	19	29	24	49	49	39	54	61	50	518
0.40	90	88	42	48	55	37	73	77	63	89	96	82	840
0.30	144	105	70	74	81	58	96	105	89	118	131	122	1193
0.20	205	163	106	155	136	115	161	163	143	184	214	200	1945
0.10	305	303	202	225	223	184	238	254	213	271	308	308	3034
0.085	697	561	545	549	506	459	525	571	540	641	684	671	6949
# 0.004	388	428	540	501	579	591	560	514	510	444	366	414	5835
Total No. of days.	1085	989	1085	1050	1085	1050	1085	1085	1050	1085	1050	1085	12784

Including rainless days

TABLE V. Accumulated Frequencies of Daily Rainfall Amounts 1916-1950

Wakefield

Daily Total (in inches)	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	All Months
2.50													
2.40													
2.30													
2.20					1								1
2.10					1			1					2
2.00					2			1					3
1.90					2			1					3
1.80					2			2					4
1.70					2			2	1				5
1.60					2			2	1				5
1.50		1			2		2	2	1				8
1.40	1	1	1		2		3	3	1				12
1.30	1	1	1		2		5	3	3				16
1.20	1	1	2		2		7	7	3	3		1	27
1.10	2	4	5		4	2	9	8	4	4	1	1	44
1.00	3	4	7		5	3	9	11	5	5	1	2	55
0.90	7	6	8	1	8	4	11	14	7	8	4	2	80
0.80	11	8	8	5	10	6	18	20	9	16	5	3	119
0.70	15	13	8	6	16	8	23	23	14	21	10	5	162
0.60	22	18	13	12	24	12	37	29	20	26	25	10	548
0.50	30	31	19	19	30	16	45	38	34	38	40	13	353
0.40	55	50	29	34	43	34	57	52	51	51	61	34	551
0.30	87	72	55	52	80	51	88	89	72	77	86	65	874
0.20	139	113	94	101	124	91	148	148	114	135	153	117	1477
0.10	276	217	169	207	217	180	230	247	202	246	278	252	2721
0.005	661	547	518	524	498	453	527	546	499	593	630	645	6641
* 0.004	424	442	567	526	587	597	558	539	551	492	420	440	6143
Total no. Of days.	1085	989	1085	1050	1085	1050	1085	1085	1050	1085	1050	1085	12784

* Including rainless days

TABLE V. Accumulated Frequencies of Daily Rainfall Amounts, 1916-1950

York

Daily Totals (in inches)	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	All Months
2.70					1								1
2.50					1								1
2.40					1								1
2.30					1			1					2
2.20					1			1					2
2.10					1		1	1					3
2,00					1		1	1					3
1.90					1		1	1					3
1.80					1		1	1	1				4
1.70					1		1	1	2				5
1.60		1			1		1	1	2				6
1.50		1			1		2	1	2				7
1.40		1			1		2	2	3				9
1.30		1			1	2	2	2	4				12
1.20		1			1	3	4	4	4	3			20
1.10		2	1		1	5	5	6	5	3		1	29
1.00	1	3	1		3	5	7	6	6	6		1	39
0.90	1	3	1		6	6	9	8	8	8	2	1	53
0.80	4	4	2	2	8	6	17	11	11	9	3	3	80
0.70	8	7	2	4	11	10	20	20	14	17	11	5	129
0.60	17	10	3	8	13	15	25	26	18	22	22	10	189
0.50	26	17	11	13	18	24	36	38	27	28	26	16	280
0.40	42	28	17	21	39	34	55	59	42	46	48	29	460
0.30	80	45	36	43	64	65	86	92	70	72	79	52	784
0.20	141	96	77	98	115	109	139	152	115	116	142	120	1420
0.10	267	180	172	210	214	192	246	266	210	234	267	244	2702
0.005	628	498	476	494	481	459	509	526	488	567	619	598	6343
* 0.004	457	491	609	556	604	591	576	559	562	518	431	487	6441
Total No. of days.	1085	989	1085	1050	1085	1050	1085	1085	1050	1085	1050	1085	12784

* Including rainless days

TABLE V. Accumulated Frequencies of Daily Rainfall, 1916-1950

Settle

Daily Totals (in inches)	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	All Months
2,50													
2.40													
2.30										1			1
2.20										2			2
2.10							1		1	3			5
2.00							1		1	4	2		8
1.90							1		1	4	3	1	10
1.80		2					1		1	4	3	1	12
1.70	1	2		1			1		1	5	3	1	15
1.60	3	2	1	1	1		1	1	1	7	4	?	24
1.50	4	3	1	1	1	1	1	2	1	8	5	3	31
1.40	7	4	1	1	2	1	1	5	4	10	7	5	48
1.30	8	6	3	1	2	3	3	7	7	11	10	5	66
1.20	12	9	4	3	3	3	5	10	8	14	12	7	90
1.10	20	13	4	4	5	4	10	12	10	18	15	11	126
1.00	24	17	4	4	5	5	11	18	13	21	20	14	156
0.90	31	22	6	5	8	7	19	34	17	36	31	16	232
0.80	45	32	9	10	12	14	29	41	29	46	46	29	342
0.70	64	44	17	18	15	20	37	54	46	62	63	46	486
0.60	91	56	23	31	24	30	50	75	64	89	82	62	677
0.50	120	76	35	40	36	40	66	96	87	117	110	89	912
0.40	158	104	55	63	69	63	96	128	119	165	135	137	1294
0.30	229	151	103	103	112	88	151	183	154	220	195	194	1883
0.20	330	227	167	165	174	160	224	256	228	297	282	285	2795
0.10	443	340	278	291	286	266	353	369	348	421	404	420	4219
0.005	725	565	533	546	499	503	596	625	583	662	649	706	7192
* 0.004	360	424	552	504	586	547	489	460	467	423	401	379	5592
Total No. of days.	1085	989	1085	1050	1085	1050	1085	1085	1050	1085	1050	1085	12784

* Including rainless days

TABLE VI

Maximum and Minimum Monthly and Annual Totals of Rainfall (in inches) 1916-1950 with supplementary list covering extremes for the 50-year period 1911-1960

	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year
Scarborough	1945	1941	1937	1937	1932	1931	1920	1927	1918	1933	1925	1918	1937
(Max	4.58	3.99	3.63	3.26	6.58	3.19	5.77	5.24	5.06	4.64	4.87	4.99	33.27
1916-1950													
(Min	1916	1943	1921	1938	1944	1925	1935	1933	1929	1947	1920	1941	1921
	0.67	0.45	0.13	0.26	0.68	0.18	0.51	0.41	0.26	0.58	0.49	0.56	18.74
	1960	1958				1911	1915	1951	1952	1960			1960
(Max	5.10	4.10				4.61	6.41	6.23	5.33	7.97			34.05
Other													
Extremes		1959		1912	1959			1959					
(Min		0.41		0.19	0.47			0.31					
Holme-on-Spalding Moor	1928	1933	1947	1937	1932	1931	1940	1930	1944	1933	1946	1938	1931
(Max	4.87	4.14	3.81	4.80	6.78	5.23	7.50	4.47	5.21	5.56	5.33	4.86	32.30
1916-1950													
(Min	1949	1930	1929	1938	1935	1925	1935	1947	1928	1946	1945	1941	1921
	0.64	0.45	0.15	0.14	0.45	0.09	0.40	0.31	0.24	0.59	0.66	0.47	17.02
						1912		1951				1915	1912
(Max						5.53		5.09				5.38	33.38
Other													
Extremes		1959		1912			1913		1959				
(Min		0.25		0.13			0.26		0.12				
Bradford	1928	1950	1947	1920	1924	1928	1920	1917	1918	1935	1935	1929	1928
(Max	8.12	4.77	5.86	4.22	4.65	6.04	6.97	6.00	7.89	6.94	6.43	7.38	43.31
1916-1950													
(Min	1949	1921	1929	1938	1940	1921	1935	1947	1941	1946	1945	1933	1933
	1.44	0.13	0.28	0.22	0.56	0.05	0.60	0.25	0.24	0.81	0.31	0.56	24.88
				1960		1912		1956			1951	1915	1912
(Max				4.38		6.18		6.75			7.44	7.73	43.65
Other									1910				
Extremes	1911						1911		1959				1955
(Min	1.30						0.19		0.14				24.42
Wakefield	1941	1937	1947	1931	1932	1931	1939	1917	1918	1935	1940	1918	1930
(Max	4.23	4.32	5.15	3.41	5.32	4.58	5.83	4.62	6.78	4.65	4.46	4.21	32.12
1916-1950													
(Min	1949	1934	1944	1938	1940	1941	1935	1947	1917	1947	1945	1941	1921
	0.82	0.34	0.25	0.08	0.48	0.09	0.82	0.33	0.48	0.77	0.38	0.45	17.57
	1960	1958						1954		1960	1951	1915	1960
(Max	4.84	4.34						5.88		6.00	6.07	6.23	34.15
Other													
Extremes	1953	1959					1955	1955	1959				
(Min	0.46	0.07					0.57	0.29	0.11				

TABLE VI (Contd.)

	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec	Year
York Museum	1928	1923	1947	1937	1932	1928	1940	1917	1918	1928	1946	1929	1935
(Max	4.87	3.71	4.43	3.48	5.66	4.00	3.12	5.11	5.81	3.92	5.39	5.04	29.83
1916-1950	1949	1921	1929	1938	1919	1925	1935	1947	1928	1946	1945	1941	1921
(Min	0.68	0.13	0.20	0.10	0.91	0.02	0.35	0.27	0.32	0.66	0.36	0.46	16.01
						1912		1954		1960		1915	1912
(Max						6.08		7.18		5.08		5.23	33.01
Other													
Extremes	1953			1912	1956				1910				
(Min	0.47			0.06	0.91				0.23				
Settle	1928	1937	1947	1947	1920	1928	1920	1946	1918	1916	1931	1929	1928
(Max	12.13	8.18	6.05	5.18	6.57	7.16	7.84	8.33	11.29	12.18	9.11	10.42	59.73
1916-1950	1941	1932	1931	1938	1939	1925	1935	1947	1941	1947	1945	1933	1933
		1934											
(Min	1.21	0.28	0.59	0.69	0.73	0.10	1.53	0.14	0.72	0.93	0.32	0.65	32.79
			1913	1913									1954
(Max			6.97	5.48									61.08
Other													
Extremes							1911		1959				1955
(Min							0.61		0.31				30.72

TABLE VII

Maximum Daily Rainfall (in inches) 1916-1950 with additional maxima for the 50-year period 1911-1960

	Jan	Feb	Mar	Apr	May	June	Jly	Aug	Sep	Oct	Nov	Dec
Scarborough												
1916-1950 Max	1937 1.08	1934 1.03	1919 1.27	1945 0.96	1932 1.63	1948 1.16	1940 2.91	1927 1.78	1931 1.71	1933 1.27	1927 1.58	1937 1950 1.08
Other Extremes Max	1960 1.11					1911 1.35		1951 2.27		1960 1.35		1955 1.12
Holme-on-Spalding Moor												
1916-1950 Max	1948 1.04	1933 0.83	1947 0.92	1937 0.92	1932 3.58	1926 1.45	1939 2.21	1948 1.60	1946 1.33	1933 1.85	1943 1.27	1919 0.85
Other Extremes Max								1957 3.00			1951 1.75	1957 0.96
Bradford												
1916-1950 Max	1944 2.32	1923 1.39	1919 1.87	1941 1.32	1947 2.00	1928 1.50	1932 2.21	1922 2.08	1946 2.29	1941 1.74	1928 1.91	1921 1.23
Other Extremes Max					1951 2.15	1911 1.67				1959 1.77		1957 1.73
Wakefield												
1916-1950 Max	1920 1.45	1933 1.52	1947 1.46	1946 0.93	1945 2.21	1936 1.17	1919 1.50	1922 2.12	1946 1.73	1941 1.22	1916 1.12	1922 1.20
1911-1960 Max						1911 1.67				1952 1.29	1954 1.20	1957 1.59
Other Extremes												
York												
1916-1950 Max	1933 1.04	1934 1.60	1947 1.11	1946 0.83	1932 2.77	1920 1.35	1920 2.13	1948 2.35	1931 1.87	1935 1937 1.25	1921 0.98	1918 1.12
1911-1960 Max	1913 1.16										1951 1.64	
Other Extremes												
Settle												
1916-1950 Max	1948 1.70	1950 1.40	1928 1.62	1923 1.72	1925 1.65	1928 1.54	1933 2.15	1928 1.65	1944 2.17	1941 2.30	1923 2.07	1929 1.95
1911-1960 Max												
Other Extremes												

APPENDIX I

Intense Falls of Rain in 2 hours or less, 1865-1960
Extracted from British Rainfall

N = Noteworthy
R = Remarkable
VR = Very Rare

Year	Class	Station	Riv. Div.	Date	Amount in.	Duration min.	Rate in/hr.
Yorkshire E. Riding							
1889	R	Thixendale	3	July 24	1.40	50	1.68
1895	VR	Middleton-on-the-Wolds	3	June 27	2.00	30	4.00
1899	N	Hull, Pearson Park	3	July 12	1.14	40	1.71
1911	R	Malton, The Leat Ho.	2	Aug. 20	1.61	30	3.22
1912	R	Beverley, E.R. Asylum	3	Jul. 24	2.00	120	1.00
1916	R	Bridlington	4	" 7	.99	15	3.96
1931	N	Westow Vicarage	2	June 14	1.16	30	2.32
"	N	Holm-on-Spalding Moor	3	" 19	1.18	60	1.18
1936	R	Ganton Hall	2	June 21	2.00	75	1.60
1939	R	Holme-on-Spalding Moor	3	" 19	1.18	60	1.18
1947	N	Hessle, Westfield Rise	3	July 16	1.40	120	.70
1950	N	Hessle, Sandford	3	Aug. 7	.96	20	2.88
1954	N	Hessle, Sandford	3	May 28	.73	17	2.58
"	N	Pinlaby, Beverley Road	3	" "	1.20	45	1.60
1958	N	Hull, Springhead	3	July 2	1.01	45	1.35
"	N	Skirlough	3	Aug. 4	.77	30	1.54
1960	N	Withernsea	4	July 5	1.10	60	1.10
Yorkshire N. Riding							
1868	R	Northallerton	2	Aug. 6	1.87	90	1.25
1893	R	Northallerton	2	June 23	1.85	60	1.85
"	N	Baldersby	2	July 8	1.33	120	.67
1895	N	Scarborough	5	" 26	.76	27	1.69
"	N	" ,S. Cliff	5	June 30	.75	27	1.67
1896	VR	Guisborough, Hutton Hall	5	July 7	3.07	75	2.46
1899	N	Baldersby	2	June 29	.90	30	1.80
1910	N	Malton	4	May 20	.96	25	2.30
"	R	Thornton-le-Dale	4	" 21	1.71	60	1.71
1911	N	Pickering	4	June 17	1.03	30	2.06
"	R	Malton, Broughton Rise	4	Aug. 20	1.51	31	2.92

Year	Class	Station	Riv. Div.	Date	Amount in.	Duration min.	Rate in/hr.
Yorkshire N. Riding Contd.							
1911	VR	Haxby, Moorlands	3	May 13	3.25	120	1.63
1927	N	Ampleforth College	4	Aug. 13	1.18	60	1.18
1928	N	East Ayton, Derwent Ho.	4	Sep. 1	.88	45	1.17
1930	R	Middleham, Catescu	1	Aug. 27	1.75	45	2.33
"	R	Leyburn, Spennithorne	1	" 29	2.05	75	1.64
"	R	Felixkirk, Mt. St. John	2	July 14	1.27	48	1.59
1932	R	Pickering, Hungate Hall	4	July 11	1.50	60	1.50
1933	N	Bedale, The Hermitage	2	" 19	1.46	90	.97
1934	R	Castleton	5	" 18	2.15	60	2.15
"	N	Felixkirk, Mt. St.John	2	" 13	1.22	50	1.46
1936	N	Pickering, Hungate Hall	4	Aug. 15	.70	20	2.10
1939	N	Leyburn, Spennithorne	1	" 21	.83	35	1.42
"	R	Thirsh, South Villa	2	July 20	2.46	90	1.64
"	N	Catterick Airfield	2	" 17	.98	48	1.23
1940	R	Scarborough	4	" 10	1.59	65	1.47
1944	N	Scorton	2	June 30	.81	30	1.62
1946	N	E. Harsley, Harsley Hall	2	July 13	1.10	30	2.20
"	R	Farndale Vicarage	4	June 23	1.28	15	5.12
1948	R	Leeming Airfield	2	July 31	1.30	35	2.23
"	N	" "	2	" 31	1.45	65	1.34
1951	N	Scarborough	5	" 8	.53	8	3.97
1953	N	Leyburn, Spennithorne	1	" 12	.76	15	3.04
"	N	Tunstall, Craggs Lane	2	" 12	1.00	60	1.00
1956	N	Pickering, Porters Headland	4	July 27	.99	60	.99
Yorkshire W. Riding							
1871	N	Otterburn	9	July 14	1.23	120	.61
1872	R	S. Milford Rectory	9	" 11	1.50	45	2.00
1873	N	Leeds, Chapeltown	9	" 23	.94	20	2.82
1878	R	Doncaster, Magdalene	7	Aug. 6	1.25	30	2.50
"	R	Otterburn	9	June 27	2.10	90	1.40
1879	N	Stainborough, Wentworth Cas.	7	Aug. 17	1.09	32	2.04
1880	VR	Wath-upon-Dearne	7	Sep. 15	3.00	120	1.50
1883	R	S. Milford Rectory	9	June 30	1.71	30	3.42
1886	VR	Wakefield, Stanley Vic.	8	July 25	2.50	60	2.50
1889	N	Holmfirth, Yateholme	8	Aug. 6	.85	40	1.27
1889	R	" "	8	Sep. 7	1.65	75	1.32

Year	Class	Station	Riv. Div.	Date	Amount in.	Duration min.	Rate in/hr.
Yorkshire W. Riding Contd.							
1889	N	Ilkley	10	June 10	.90	45	1.20
1892	N	Hebdon Bridge	8	July 3	.70	15	2.80
1892	R	S. Milford Rectory	9	" "	1.35	30	2.70
1894	N	Wath-upon-Dearne, Chapel St.	7	" 25	1.33	120	.67
1895	R	Meltham, Harewood Lodge	8	June 26	1.13	25	2.71
"	N	Hebden Bridge	8	" 26	1.00	60	1.00
1896	N	Leeds, Elmete Hall	9	" 8	1.36	50	1.63
1900	R	Ardsley Res.	8	July 12	2.07	82	1.51
"	VR	Ilkley	10	" 12	3.75	75	3.00
"	R	Leeds, Oliver Hill, Horseforth	9	" 12	2.00	90	1.33
"	R	Wakefield, Stanley Grange	8	" 12	2.17	115	1.13
"	R	Bolton Abbey, Estate Office	10	Aug. 3	2.00	120	1.00
1904	VR	Slaithwaite, Inglewood	8	July 24	2.36	60	2.36
"	N	" "	8	" "	1.33	80	1.00
1905	R	Huddersfield Cemetery	8	Aug. 28	1.54	30	3.08
1912	N	Rawdon	9	Aug. 4	1.00	20	3.00
1914	N	Haworth, Lr. Laithe Res.	9	July 1	.63	15	2.52
"	N	" " " "	9	" "	1.00	45	1.33
"	R	Halifax, Dean Clough Mills	8	" "	1.81	75	1.45
1915	N	Sheffield, Millhouses	7	June 29	.95	30	1.90
1917	N	" "	-	" 20	.72	15	2.88
"	N	Hebden Bridge, Falling Royd	2	May 29	.97	35	1.66
"	N	York	10	June 17	.95	30	1.90
1918	R	Haworth, Lr. Laithe Res.	9	July 20	1.96	60	1.96
1920	N	York, Museum	10	June 18	.55	10	3.30
"	N	" "	10	" "	.79	20	2.37
"	N	Huddersfield, Oakes	8	Oct. 15	.87	30	1.74
"	N	Doncaster, Avenue Rd.	7	May 29	1.33	45	1.77
1924	N	Meltham, Harewood Lodge	8	Aug. 13	1.09	30	2.18
1930	VR	Ilkley, Ben Rhydding	10	Apr. 25	1.84	30	3.68
1931	N	Tockwith School	11	July 12	.90	30	1.80
"	N	Rishworth, Ringstone Res.	8	June 1	1.11	60	1.11
"	N	Burnsall Rectory	10	Aug. 19	1.07	60	1.07
"	N	Tockwith School	11	June 14	1.03	60	1.03
"	N	Holmfirth, Thongsbridge	8	July 6	1.00	60	1.00
"	N	Barnsley, Jordan Hill	7	July 25	1.50	90	1.00
"	N	Holmfirth, Thongsbridge	8	Sep. 4	1.35	90	.90

Year	Class	Station	Riv. Div.	Date	Amount in.	Duration min.	Rate in/hr.
Yorkshire W. Riding Contd.							
1932	N	Normanton, Haw Hill Pk.	8	July 11	.89	30	1.78
1937	R	Oughtershaw Hall	10	Aug. 12	2.21	120	1.11
1938	N	Wakefield, Clarence Pk.	8	Aug. 6	1.00	30	2.00
1939	N	Rotherham, Broom Lane	7	July 16	1.44	90	.96
"	N	Heckmondwicke, The Bottoms	8	" 20	1.33	90	.89
"	R	Dewsbury, Municipal Offices	8	" 20	1.60	55	1.75
1943	N	Rotherham, Ramsden Road	7	Sep. 13	.96	29	1.99
"	N	Bolton Abbey Estate Office	10	" 14	.95	30	1.90
"	N	Adel, Lawnswood Cemetery	9	Aug. 5	1.01	45	1.35
"	N	Burton Leonard	12	" 5	1.21	60	1.21
1944	N	Harrogate, Harlow Moor Ob'sy	11	June 30	.78	9	5.20
1947	N	Leeds, Chapel Allerton	9	May 28	1.19	90	.79
"	N	" " "	9	July 16	1.22	94	.78
"	N	Bradford, Waverley Terrace	9	May 30	1.50	120	.75
"	R	Sheffield W.W., Rivelin	7	July 16	.90	10	5.40
1950	R	Leeds, Weetwood Filter Beds	9	Aug. 7	1.97	95	1.24
"	N	Leeds, Farnley Hall	9	" "	1.55	102	.91
1952	R	Rotherham, Ramsden Road	7	July 1	1.46	46	1.90
"	N	Rotherham, Herringthorpe	7	" 1	1.42	75	1.14
"	N	" Broom Lane	7	" 1	1.14	75	.91
"	N	Skipton, Town Hall	9	May 18	1.00	20	3.00
"	N	Langsett Res.	7	July 1	.85	36	1.42
"	N	Rotherham, Alwarke Res.	7	" "	1.20	38	1.89
1953	R	Halifax W.W., Gorple Res. No. 1	8	June 26	2.12	120	1.06
1954	R	Ilkley, Spences Garden	10	May 12	2.29	120	1.15
"	N	Rotherham, Aldewarkes S.W.	7	Aug. 20	1.16	48	1.45
"	N	Sheffield W.W. Redmires Res.	7	" "	.93	50	1.12
"	R	" " " Rivelin	7	May 12	1.70	60	1.70
"	N	" " " "	7	May 12	1.00	20	3.00
"	N	" " " "	7	Aug. 20	1.00	60	1.00
"	N	" " " Redmires Res.	7	" 21	1.27	85	.90
1956	VR	Bradford W.W. Stubden Res.	9	June 11	2.45	75	1.96
"	VR	" " " Hewenden Res.	9	" "	6.09	105	3.48
1957	N	Langsett Res.	7	" 3	.81	30	1.62
"	N	Tockwith School	11	" 30	1.59	90	1.06
1958	R	Litton, Manor Cottage	10	" 22	2.07	120	1.03
"	VR	Harrogate, Belton S. Wks.	11	Aug. 22	2.50	70	2.14
"	N	Wincobank S. Wks.	7	" "	1.00	25	2.40

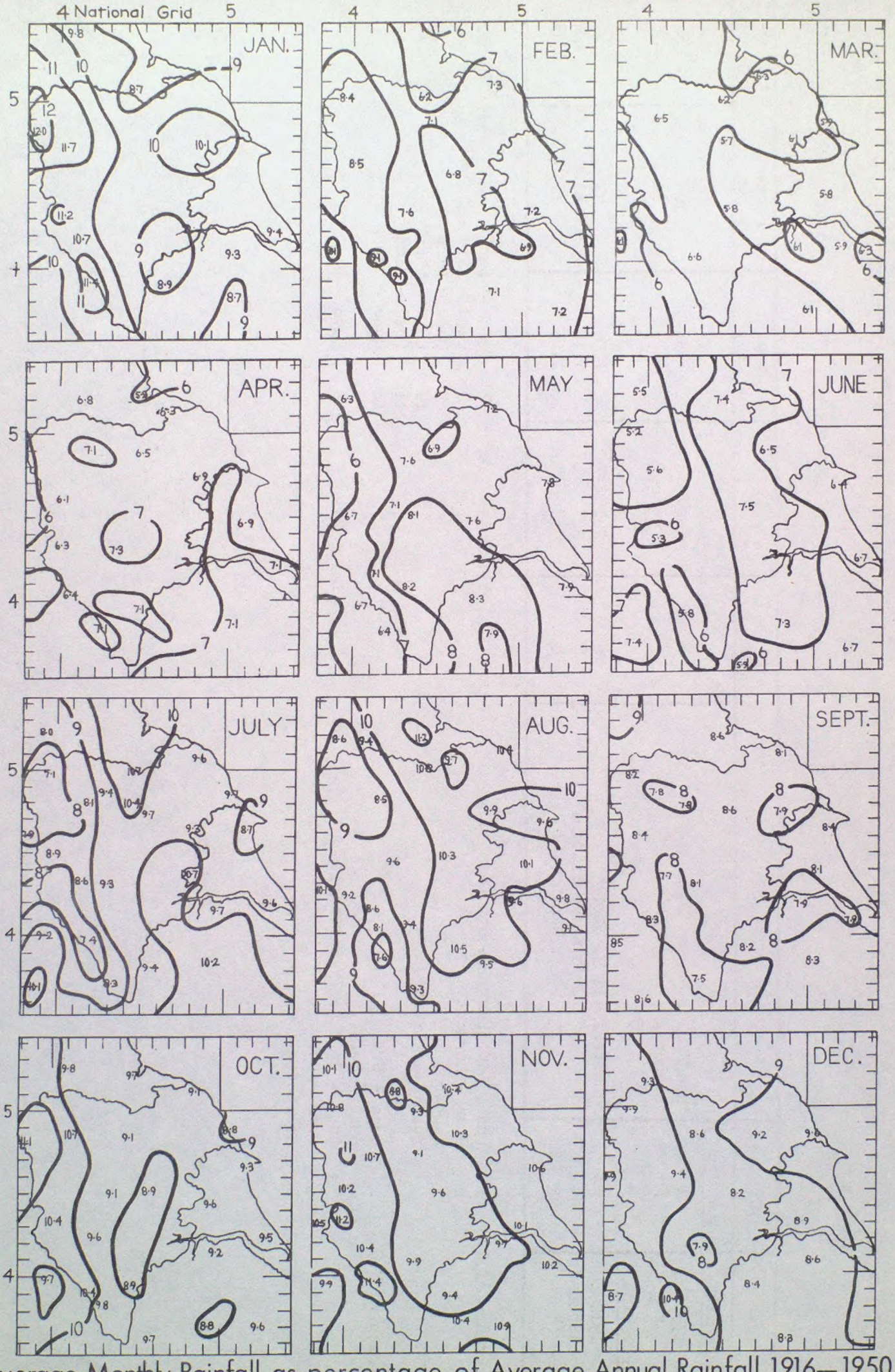
Year	Class	Station	Riv. Div.	Date	Amount in.	Duration min.	Rate in/hr.
Yorkshire W. Riding Contd.							
1958	N	Sheffield, Norton Lees	7	Aug. 22	.92	47	1.17
"	N	Rotherham, Broom Lane	7	July 21	1.25	70	1.07
Derbyshire							
1912	R	Chesterfield S. Wks.	8	July 27	1.35	40	2.02
1952	N	" Linacre Filters	8	" 1	1.18	30	2.36
"	N	" S. Wks.	8	" "	1.25	75	1.00

Yorkshire E.R.
1 Ouse, Left bank Tributaries
2 Ouse - Derwent
3 Humber
4 East Coast Streams

Yorkshire N.R.
1 Ouse - Ure
2 Ouse - Swale
3 Ouse - left bank tributaries
4 Ouse - Derwent
5 Esk and c

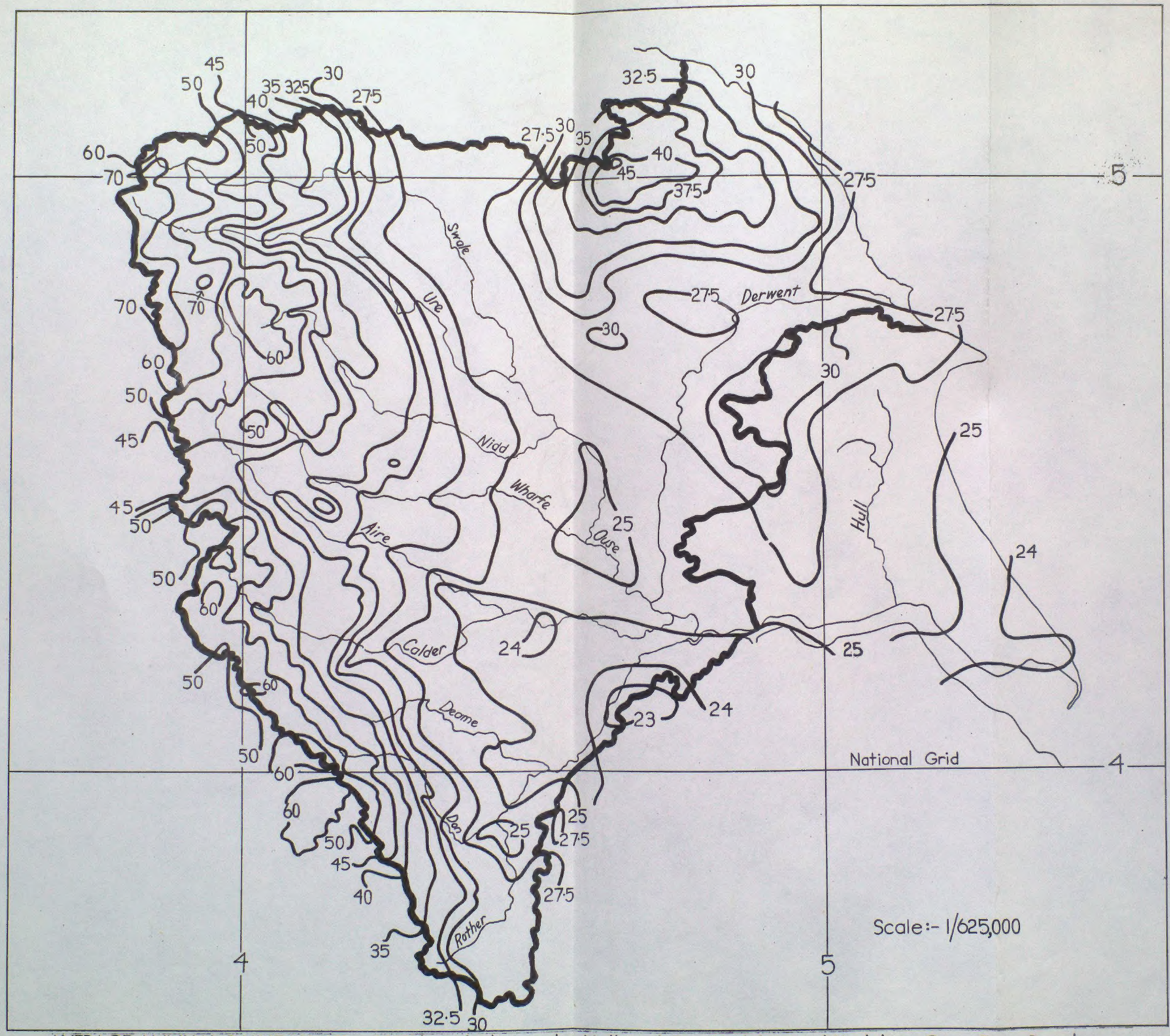
Yorkshire W.R.
7 Ouse - Don
8 Ouse - Aire - Calder
9 Ouse - Aire
10 Ouse - Wharf
11 Ouse - Nidd
12 Ouse - Ure

Derbyshire
8 Ouse - Don



Average Monthly Rainfall as percentage of Average Annual Rainfall 1916—1950

Fig 1



AVERAGE ANNUAL RAINFALL 1916—1950 (in inches) over the Hull and East Yorkshire and Yorkshire Ouse River Board areas.

Fig 2